



**Scientific, Technical and Economic  
Committee for Fisheries (STECF)**

**The Annual Economic Report (AER) 2008  
on the Profitability of European Fleets  
(SGECA 08-02)**

**Joint Working Group on Economic Affairs  
(SGECA) of the Scientific, Technical and  
Economic Committee for Fisheries  
(STECF)**

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## **1. INTRODUCTION**

STECF is requested to review the "Annual Economic Report (2008)" to make appropriate comments and recommendations. This report gives an overview of the economic situation for the European fishing fleets.

The economic data is collected within the framework of the Data Collection Regulation (DCR), cf. Council Regulation (EC) No 1543/2000 of 29 June 2000. Statistical tables included in the report have been prepared by JRC on the basis of the official economic data sent by Member States.

The SGECA meeting 08-02 analysed the economic data and prepared the report. This is the second year that the report has been prepared by a working group under the Scientific, Technical and Economic Committee for Fisheries (STECF).

The report covers data from 2003 to 2006, but there are also comments about the trends and outlook in 2007 and first part of 2008 for the fisheries in each of the Member States.

## **2. STECF OBSERVATIONS**

The STECF recognizes that the report is much more complete than the 2007 report (STECF/SCEGA-07-02 Preparation of Annual Economic Report, 12-16 March 2007, Brussels) and it includes more information and discussions. National chapters are well structured.

STECF observes that the chapters on price formation and fuel cost give a comprehensive analysis and include useful information.

In order to describe the development in fish prices within the European Union, a distinction is made between two overall regions, i.e. the Mediterranean and the Atlantic Ocean. In the Mediterranean area, nominal prices have modestly increased for the majority of the species analysed. The exception to this is anchovy, giant red shrimp and Norway lobster. The data shows that the annual price increases for these species are significant, and are more than likely to have exceeded inflationary increases in each of the countries involved. Price development of the top 10 most important species in terms of landings value, landed in the Atlantic fishing region, reveals that there is a general upward trend in the average annual price (first sale price) for most of these species, and that this is particularly evident between 2005 and 2006. If inflation is taken into account, the real average prices of most of these species have remained fairly stable.

Expenditure on fuel represents a significant component in the running costs of fishing fleets. Fuel price trends in each MS are mostly similar. The increasing fuel price trend contains two significant price shocks. The first shock was in the period 2004-05 and the price increase in that period was around the 33%. At the time of the meeting a new price shock with a similar change (33%) had occurred.

Fuel prices are currently fluctuating significantly with a clear upward trend. It is estimated that an increase of 33% in fuel price will create a reduction of the average Gross Value Added (GVA) of around 28% for the included fleets, which are all using gears giving rise to considerable fuel use, i.e. primarily mobile gears in form of trawl. If fuel prices increase with

50% instead compared to the level in 2006, this implies a reduction in GVA of 42%, assuming that fishing patterns do not change.

Despite increased effort and organization for the preparation of the AER, STECF notes that:

- While STECF asked the Commission to clarify the purpose of the report during the November 2007 plenary, these had not been identified before the meeting.
- There are several data missing with respect to years, variables and coverage for several countries. Therefore the European overview summary is incomplete and general trends cannot be evaluated
- No regional analysis attempted. For this meeting data were available at national level only, because the call for data was in line with the requirements of the present DCR. Therefore, at this stage, no complete regional analysis was possible.
- No report is available for some Member States. The participants in the SGECA meeting did not have the necessary expertise to cover all the countries.
- The report has been prepared one and a half year after the end of the reference year. Like last year, the report has been delayed for various reasons (timely data availability, organizational problems)
- The report includes statistical tables, but no information is given on the quality of data and its reliability

### **3. STECF CONCLUSIONS AND RECOMMENDATIONS**

STECF recommends that the working process for the AER be better organised. STECF proposes the following organisation in addition to the recommendation made in the November plenary:

- In a first meeting (one or two days), experts should discuss the contents and format of the national contributions and the methodology used to analyse the specific issues (e.g. fuel prices) to be taken into the AER.
- A call for data should be launched and the quality of the data provided by Member States should be checked.
- After the first meeting, the writing of the text on the MS should be done by correspondence by the relevant national expert before the SGECA meeting. The WG should check for consistency of the national texts and prepare regional statistics.
- During the second meeting the experts present could then focus on specific issues like fuel or regional analyses and finalise the report.

STECF supports the regional approach taken in the new DCR. In order to keep consistent time series, STECF recommends that JRC should make it technically possible for MS to provide regional data and the Commission to ask MS to provide data by the regions identified in the new DCR if available.

If a regional analysis is required for the 2008 AER and if regional data cannot be provided by Member States, STECF suggests that a preliminary analysis could be done based on experts' knowledge and assumptions on the allocation of vessels into different regions.



STECF recommends that the STECF working group on data quality (SGECA –08-03) should advise which kind of metadata are necessary to assess the quality of the data. This information should be available from the national technical reports and should be used in the AER.

The STECF recognises that the AER is the only compilation of economic statistics available to researches, fisheries administration and stakeholders. But at the same time STECF underlines that the AER has not to be considered as the only source of economic information and the segmentation presented in the AER may not be appropriate for specific evaluations. In case the Commission needs economic advice on specific fleets and/or specific issues, a call of data should be launched in order to get appropriately detailed data.

## **ANNEX 1**

SGECA 08-02 WORKING GROUP REPORT Preparation of Annual Economic report.

**Copenhagen, 21-25 April 2008**

*This report does not necessarily reflect the view of the European Commission and in no way anticipates the Commission's future policy in this area.*

## **4. INTRODUCTION**

### **4.1. Background**

European fisheries are currently in a transformation period. Several stocks are under significant pressure and fuel prices are steadily rising, thus putting severe economic pressure on many fleets around in Europe. Furthermore, the national management systems in several Member States are being transformed towards economic based instruments, i.e. primarily individual rights, giving rise to optimism in many fisheries, despite rising fuel costs.

This Annual Economic Report gives an overview of the economic situation for the European fishing fleets. Compared to previous years, this report includes a more detailed description of each Member States fisheries besides the range of tables.

The report has been produced by a working group (SGECA 08-02) under the Scientific, Technical and Economic Committee for Fisheries (STECF), which convened 21-25 April 2008 in Copenhagen, Denmark. The group consisted of 19 experts and 3 persons from DG MARE and DG JRC. Names and affiliations of these experts can be found in section 4.3. Furthermore the working group wish to express their gratitude to Max Nielsen, Institute for Food and Resource Economics, for his presentation and contribution to the section regarding determination of fish prices.

The report is covering data from 2003 to 2006, but there are also included comments about the trends and outlook in 2007 and first part of 2008 for the fisheries in each of the included Member States. The economic data is collected within the framework of the Data Collection Regulation (DCR); cf. Council Regulation (EC) No 1543/2000 of 29 June 2000. A description of data coverage can be found in Appendix 1.

The working group observes that there are still some data missing with respect to years, variables and coverage for several countries. The produced tables must therefore be read with care taking these elements into consideration. However, the current publication is considered to be the most comprehensive publication of economic figures for fisheries in the European Union.

### **4.2. Terms of Reference**

The SGECA working group was asked to address the following Terms of Reference:

1. Prepare national chapters of current economic performance of EU fishing fleets, providing trends and outlooks
2. Based on national data, prepare regional analyses of economic performance
3. Examine trends in fish prices on EU markets
4. Analyse the impact of rising fuel prices on economic performance of fleets

During the meeting, the working group did unfortunately not have sufficient time to address point 2 in the Terms of Reference.

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#### 4.4. Glossary

This glossary briefly explains the definitions of the different variables used in AER 2008. The legal basis for these definitions are found in Council Regulation (EC) N° 1543/2000 of 29 June 2000 establishing a Community Framework for the collection and management of the data needed to conduct the common fisheries policy – OJ L 176, 15.7.2000, p.1.

*Costs and earnings*

Value of landings	Value of landed fish calculated on the basis of the first hand price of fish to the fisherman.
Income	Total income including value of landings, subsidies, tourism etc.
Crew cost	Crew cost including social security, health insurance, retirements and other related taxes.
Fuel cost	Cost of fuel
Repair cost	Cost of repair and maintenance
Variable cost	Operational costs - sum of all costs (other than fuel and crew costs) which are related to fishing effort.
Fixed cost	Sum of all costs which are not related to fishing effort (other than repair and capital costs)
Capital cost	Total costs related to the total invested capital (i.e. depreciation and interest). National interest rates and depreciation times have been applied

*Profitability measures*

Cash flow	Income minus all operational costs, excluding capital costs: income – (fuelcost + crewcost + repcost + varcost + fixedcost)
Break even revenue	Long term break even revenue. The income (revenue) level at which profit is zero: $BER = ((\text{fixed costs} + \text{rep cost} + \text{capital costs}) / ((\text{gross cash flow} - (\text{fixed costs} + \text{rep costs}))/\text{income}))$
Profit	Income minus all costs, including capital costs: income – (fuelcost + crewcost + repcost + varcost + fixedcost + capitalcost)
Value added	Contribution to gross national product (GNP). Income minus all expenses except crew cost: income – (fuelcost + repcost + varcost + fixedcost + capitalcost)

*Employment*

Total	Number of persons employed
FTE	Number of full time equivalent (methodologies to calculate 1 FTE varies between the countries)

*Capacity*

Fleet (number)	Number of vessels
Fleet GT	Gross tonnage
Fleet KW	Maximum continuous engine power

*Other*

Days	Days at sea
Landings weight	Weight declared on landings
Fuel cons	Consumption of fuel



## 5. EUROPEAN OVERVIEW

The fishing fleet in the European Union is characterised by being very different in relation to size, gears used, type of fishing activity and regulatory framework. However, before describing the fishing fleet of each Member States, this section gives a brief overview of the EU fishing fleet using a few general indicators, cf. the table below.

Making a complete European overview is complex based on the available data. It must be noticed that data are not complete for some Member States, cf. coverage report in Appendix 1, and the figures should therefore be considered with outmost care. For instance, comparison with Eurostat statistics results in discrepancies. Furthermore, the inclusion of new Member States in 2004 also influences comparability. However, the overview tables will become more reliable as data improves. The section can potentially also help to improve the coverage and the quality of the DCR data in the future.

Due to these data constraints, no description of data trends will be provided.

### Overview of the European fishing fleet

	2003	2004	2005	2006
<i>Volume of landings</i>				
WEIGHT OF LANDINGS (1000t)	4,457	5,053	5,140	4,820
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	8,174	5,084	6,206	6,490
INCOME (mln EUR)	10,099	7,666	7,335	6,422
<i>Other economic indicators</i>				
EMPLOYMENT (TOTAL)	183,204	141,771	118,013	94,996
EFFORT DAYS (1000)	7,878	7,445	7,533	7,352
<i>Capacity indicators</i>				
FLEET (number)	82,584	82,096	83,690	80,422
FLEET GT (1000)	2,047	2,105	2,174	2,125
FLEET KW (1000)	7,613	7,623	7,672	7,439
<i>Average characteristics of vessels</i>				
GT	25	26	26	26
KW	92	93	92	92
AGE	19	19	14	15

## 6. COUNTRY ANALYSIS

### 6.1. Belgium

#### 6.1.1. National fleet

At the end of 2006 the Belgian commercial fleet counted 107 vessels, a decrease of 13 compared to 2005. Of these vessels, 102 were equipped as beam trawlers, 2 as demersal trawlers and 3 for fixed gear fishing. As a result, the only fleets of any importance relate to beam trawling (12-24 metres, and 24-40 metres).

The main species targeted are plaice, sole, skates and rays, cod and lemon sole, whereby (Dover) sole makes up about 50% of the total landing value. The most important fishing areas are the Eastern Channel (VIId), and the central and Southern part of the North Sea (IVb and IVc).

The major factor influencing profitability is energy cost. Availability of competent crew members is more and more becoming an issue as well.

A number of vessels left the fleet, either voluntarily or within the framework of a program with public subsidies. On balance, the fleet decreased with more than 10% in number, while the average tonnage remained more or less constant, and the average engine power increased further. The upper kW limit was raised to 1,200 kW in 2006.

General economic conditions deteriorated further, only partly offset by rising fish prices.

Although there is a lot of research effort going into finding alternatives for beam trawling, no method has so far gained any major acceptance.

#### Basic data total national fleet

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	90.3	85.8	86.2	90.6
VALUE ADDED (mln EUR)	40.1	34.5	25.5	20.5
CASHFLOW (mln EUR)	5.9	1.0	-8.0	-17.8
PROFIT (mln EUR)	-1.4	-6.0	-14.4	-23.5
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	578.0	533.0	570.0	562.0
CAPITAL VALUE (mln EUR)	115.6	107.6	91.4	77.3
EFFORT DAYS (1000)	22.5	23.5	22.2	20.0
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	23.6	23.5	21.4	20.2
FLEET (number)*	126.0	121.0	120.0	107.0
FLEET GT (1000)*	23.8	22.8	22.6	20.0
FLEET KW (1000)*	67.1	65.6	65.4	60.2

<i>Average characteristics of vessels</i>				
GT	188.9	188.0	188.2	187.2
KW	532.5	541.9	545.2	562.5
AGE	19.3	19.7	20.7	21.4

Note: \* includes 7 inactive vessels during 2006 with 1,063 GT and 3,301 kW.

### Production and prices

In the period 2003-2006 average fish prices of the main species for Belgian fishermen showed a positive trend; particularly the price of Dover sole, accounting for about 50% of the value of all Belgian catches, increased by 30% over this period. On the other hand production of most species decreased or remained stable at best. As the composition of the fleet hardly altered – focused on beam trawling – the major species caught also remained the same over these years.

### **Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Dover sole	4.9	4.5	4.2	3.8	44.0	40.5	42.1	45.1	9.03	9.03	10.09	11.80
European plaice	6.1	5.8	4.8	4.9	12.7	10.6	9.5	9.7	2.07	1.82	1.97	1.99
Turbot	0.4	0.4	0.4	0.4	4.6	4.3	4.0	4.3	10.64	10.74	11.38	12.16
Lemon sole	1.0	1.3	1.1	0.9	3.8	4.6	4.4	4.2	3.90	3.57	3.99	4.73
Monk fish	0.4	0.5	0.4	0.4	3.5	4.3	4.3	4.2	8.29	8.67	9.92	10.45
Atlantic cod	1.6	1.6	1.8	1.3	4.2	4.5	4.5	4.0	2.70	2.75	2.58	2.99
Skates and rays	1.8	1.9	1.9	1.8	2.7	3.2	3.2	3.4	1.54	1.66	1.65	1.90
Brill	0.5	0.4	0.4	0.4	3.2	2.7	2.9	3.1	7.00	6.87	7.76	8.32
Common shrimp	0.9	0.6	0.8	0.7	2.9	1.7	2.3	2.6	3.19	2.91	2.93	3.68
Cuttlefish	0.6	0.8	0.6	0.7	0.8	1.0	0.9	1.5	1.36	1.19	1.43	2.04
Other species	5.5	5.8	5.3	5.1	8.0	8.6	8.3	8.8	1.45	1.48	1.57	1.73

### Composition by fleet

As already explained, there are only two fleets with a sufficient number of vessels to be considered: (1) the smaller beam trawlers and (2) the large beam trawlers. For the other two fleets, the number of vessels is too small, so that figures relating to demersal trawlers and fixed gear vessels are to be considered as illustrative.

The smaller beam trawlers can be subdivided into two distinct groups: (1) “eurocutters” that generally have 221 kW engine power and LOA of maximum 24 metres, and operate in the North Sea and the Eastern channel, but some vessels may operate as far as the Bristol channel (VIIIf), and (2) “coastal vessels” that specialise – at least part of the year – in shrimp fishing; as the name implies only coastal areas are fished, sometimes as far north as Denmark.

The large beam trawlers account traditionally for the major share of value and volume of landings; they operate as far south as the Bay of Biscay and northwards into the Norwegian zone of the Central North Sea. Fishing trips typically last 8-10 days and often the catch is landed into foreign harbours, but sent to Belgian auctions by lorry.

**Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW	Employment (FTE)	Gross value added (mln EUR)
Demersal trawl 24-40m	0.41	1.65	2	1.07	10	0.4
Fixed gear 12-24m	0.11	0.96	3	1.16	12	0.23
Beam trawl 12-24m	4.09	18.86	49	10.44	178	2.92
Beam trawl 24-40m	15.55	69.15	53	47.52	352	16.89

**Trends and outlook**

As a result of the decrease in number of vessels from 2005 to 2006, basic parameters per vessel improved (income, yearly catch), but because of the deteriorating economic context, i.e. increasing fuel prices, this does not translate into improving economic parameters: thus GVA decreased further for the main (beam trawl) fleets.

**Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
Demersal trawl 24-40m	93.35	117.86	33.27	300.83	214.04	-79.16
Fixed gear 12-24m	8.5	-7.5	20.96	28.21	15.01	29.02
Beam trawl 12-24m	21.57	3.79	22.69	-35.18	-39.14	33.86
Beam trawl 24-40m	18.32	5.73	15.39	-8.29	-16.93	27.39

The outlook for 2007 and 2008 remains bleak, as the main factors influencing fisheries' profitability – fuel prices, fish prices and quota – continue to develop in an unfavourable manner. In addition, crew recruitment has become more and more problematic despite the fact that crew remuneration is based on a percentage of the gross value of the catch, and is thus immune to rising costs.

Possible solutions include (1) some form of subsidy to counteract the rising fuel costs, (2) better prices, and (3) a viable alternative to beam trawling. As long as these or other improvements are not applied, economic conditions will continue to deteriorate and a number of vessels owners will face bankruptcy.

**6.1.2. Fleets of special interest****Large beam trawlers 24-40m**

This fleet forms the backbone of the Belgian fleet: it is responsible for the largest share of catches and landings of all major species, with the exception of shrimps (*Crangon crangon*). Major fishing areas are: the English Channel (VIId), the central (IVb) and southern (IVa) North Sea. About 20 vessels also participate in the Bay of Biscay (VIIIa,b) fisheries during the months of June to August, mainly fishing for sole. A few vessels also concentrate on the Irish Sea.

This fleet is the most vulnerable to fuel price increases, because of the engine power needed to operate the heavy beam trawl nets over the sea floor.

	2003	2004	2005	2006
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<i>Costs and earnings per vessel</i>				
INCOME (mln EUR)	1.1	1.1	1.1	1.2
CASHFLOW (mln EUR)	0.17	0.18	0.06	-0.09
PROFIT (mln EUR)	0.019	0.013	-0.11	-0.25
VALUE ADDED (mln EUR)	0.57	0.56	0.43	0.38
<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE)	5.56	5.38	5.87	5.87
CAPITAL VALUE (mln EUR)	1.44	1.37	1.12	0.84
EFFORT DAYS (1000)	207	238	236	214
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	17.92	18.38	16.65	15.55
FLEET (number)	65	63	60	60
FLEET GT (1000)	19.4	18.9	17.8	17.8
FLEET KW (1000)	54.4	53.5	51.4	53.6

## 6.2. Cyprus

No text available, please see Appendix 3 for tables.

## 6.3. Denmark

### 6.3.1. National fleet

In 2006 the number of vessels that took active part in the Danish fishery were 2,160 vessels, of which 1,091 were considered commercially active in the sense that the vessels were registered as active on the European Fishing Vessels Register for at least half of the year, and have had revenue from landings of fish during 2006 of more than 30,000 EUR. The commercial fleet produced 95% of the total value of the Danish fishery. The remaining 5% was produced by 1,069 partly or less active vessels, which in most cases are small vessels with very little value of landings and in some cases bigger vessels with very short period of activity.

The statistical tables in this report include all 2,160 vessels. The results will therefore for some fleets deviate from the results in the Danish account statistics for fishery, especially in the calculations of average results per vessel, because the results in the account statistics are based on the commercial fleet and do not include the less active vessels.

The Danish fleet includes demersal and pelagic trawlers, purse seiners targeting pelagic species, beam trawlers targeting flatfish, gillnetters targeting cod and plaice and Danish seiners also targeting cod and plaice. Furthermore, there are smaller specialised vessels such as mussel dredgers and shrimp trawlers.

The large pelagic trawlers and seiners over 40 metres operating in the North Sea and the Norwegian Sea make up 27% of the total catch value. The pelagic trawlers are mainly targeting industrial species such as Sandeel and Sprat and the purse seiners are mainly targeting mackerel and herring. The pelagic trawlers and seiners 24-40 metres target industrial fish as well as herring, cod fish, Nephrops, Northern prawn and anglerfish. The fleet is thus in principal a combined pelagic and demersal fleet as some vessels are using both pelagic gear and demersal gears over the year. The

demersal trawlers between 12-24 metres catch mainly cod and plaice in the North Sea, Skagerrak, Kattegat and the Baltic Sea. Also a substantial part of the catch value in the North Sea and Skagerrak/Kattegat comes from Nephrops. The vessels using passive gears are mainly gill-netters targeting cod, plaice and sole.

The total value of the Danish fishery became 435 mln EUR in 2006, a 10% increase compared with the year before, and resulted in a positive overall net profit of 18 mln EUR. The increase was mainly due to an increase in prices of all species except mackerel. The value of the capital increased by 16% from 2005 to 2006 due to high investments in fish quotas/fishing rights.

#### Basic data total national fleet

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	380	360	393	435
VALUE ADDED (mln EUR)	211	189	223	261
CASHFLOW (mln EUR)	42	31	68	101
PROFIT (mln EUR)	-43	-59	-13	18
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	3,643	3,315	2,950	2,667
CAPITAL VALUE (mln EUR)	588	574	589	683
EFFORT DAYS (1000)	224	214	190	177
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)*	1,078	1,126	947	943
FLEET (number)**	2,459	2,376	2,267	2,160
FLEET GT (1000)**	96	99	90	85
FLEET KW (1000)**	339	336	313	300
<i>Average characteristics of vessels</i>				
GT	39	42	40	40
KW	138	142	138	139
AGE	28	28	29	29

Note: \* These figures are calculated on aggregated data, and are therefore generally 3-4% higher than the official catch statistics. However, in 2006 it was 8% higher, because changes in the Danish fisheries regulation have influenced the classification of vessels. The figures is expected to be the same from 2007.

\*\* includes all vessels which have been active during the year. The number of inactive vessels is arbitrary as the capacity rights tied to a vessel in the fishing fleet register can be transferred from one vessel to another and therefore be both inactive and active in the same year.

#### Production and prices

The development in weight, value and prices 2003-2006 is shown in the table below. The industrial species sandeel and sprat together with herring constitute a big part of the landings in terms of weight. Cod and herring are the most important species with catch values of 64 and 61 mln Euro in 2006. The value of Nephrops and plaice comes next with 45 and 40 mln Euro in 2006. Prices have increased significantly for herring and Nephrops during the period 2003 to 2006.

#### Landings weight, value and average prices, national fleet

	Weight (1000t)	Value (mln EUR)	Price (EUR/kg)
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	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Cod	33.9	31.1	29.7	30.8	62.0	55.9	59.6	63.9	1.8	1.8	2.0	2.1
Herring	119.3	141.6	179.7	165.2	30.1	31.8	50.8	61.1	0.3	0.2	0.3	0.4
Nephrops	5.3	5.4	5.4	4.5	38.7	34.9	42.8	45.0	7.4	6.5	7.9	10.0
Plaice	23.8	20.9	18.7	21.6	45.5	36.0	34.9	40.3	1.9	1.7	1.9	1.9
Sandeel	291.2	309.8	166.0	275.6	31.5	29.2	15.7	38.8	0.1	0.1	0.1	0.1
Mackerel	28.1	26.9	25.0	29.3	21.2	29.5	43.1	34.2	0.8	1.1	1.7	1.2
Sprat	275.0	287.8	343.2	196.5	33.4	29.4	37.9	28.7	0.1	0.1	0.1	0.2
Sole	1.1	1.2	1.7	1.5	10.0	11.4	16.9	17.3	9.4	9.3	9.9	11.9
Common shrimp	3.3	3.2	3.9	4.2	7.3	7.1	10.3	9.7	2.2	2.3	2.6	2.3
Mussels	103.1	104.6	67.9	53.0	15.3	14.5	9.1	9.2	0.2	0.1	0.1	0.2
Other species	194.4	194.0	105.8	160.4	85.5	80.1	71.9	86.5	0.4	0.4	0.7	0.5

### Composition by fleet

An overview of economic indicators per vessel fleet is shown in the table below. The most important fleet in terms of GVA is pelagic trawlers and seiners over 40 metres with 87 mln Euro, next to that both the pelagic trawlers and seiners 24-40 metres and the demersal trawlers and seiners 12-24 metres contribute to GVA with 38 mln Euro. The demersal trawlers and seiners 12-24 metres have the highest labour input equal to 544 full time jobs followed by the polyvalent passive gear below 12 meters group, which mainly consists of gill-netters, with a total labour input of 455 FTE (full time equivalents). As three quarter of the 1,288 vessels in this group is owned by part time fishermen, the number of men taking part in the fishery is much higher than the calculated FTE.

### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW	Employment (FTE)	Gross value added (mln EUR)
Dredgers <24m	52	12	60	8	56	9
Demersal trawl and seine <12m	5	2	12	1	28	1
Demersal trawl and seine 12-24m	74	64	271	49	544	38
Polyvalent passive gears <12m	15	38	1,288	50	455	22
Polyvalent passive gears 12-24m	11	30	119	19	286	19
Polyvalent mobile gears <12m	0	0	79	4	5	0
Polyvalent mobile gears 12-24m	19	20	76	13	140	11
Pelagic trawl and seine 12-24m	57	44	98	32	295	24
Pelagic trawl and seine 24-40m	196	72	75	45	385	38
Pelagic trawl and seine >40m	504	135	47	67	383	87
Beam trawl 12-24m	5	10	29	7	59	8
Beam trawl 24-40m	4	7	6	6	31	3

Note: Dredgers <12m and 12-24m have been merged into one fleet because only a few are below 12m.

### Trends and outlook

The changes in average efficiency indicators of vessels from 2005 to 2006 are presented for each fleet in the table below.

The dredgers are primarily operating in The Lime Fjord. The dredgers had less catch but more income per vessel due to increased price of mussels. Also the income and GVA per days at sea increased in 2006, and the crew share per FTE became 21% higher than the year before.

The demersal trawlers and seiners below 12 meters have an increase in income per vessel of 217% compared to 2005. The reason for this is a decrease in number of vessels from 34 to 12, which has removed the least efficient vessels. The fishing days per vessel increased with 339% to 305 and the productivity in terms of income per days at sea thereby decreased with 28%. This can be due fishing conditions which are normally assumed to decrease with increased fishing days.

The pelagic trawlers over 40 metres are interesting, because each vessel has a large increase in catch volume and income by 18% each. The effort per vessel increased by 46% to 242 fishing days and the productivity decreased by -19% in terms of income/vessel and 18% in terms of gross value added per days at sea. Again, less favourable fishing conditions can be a reason for the decreasing productivity.

**Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
Dredgers <12m and 12-24m	4.53	-18.70	33.90	41.93	55.68	20.92
Demersal trawl and seine <12m	217.2	150.17	-27.73	-30.61	-15.12	-5.28
Demersal trawl and seine 12-24m	17.44	-11.95	29.93	38.48	36.74	14.75
Polyvalent passive gears <12m	24.48	13.54	8.59	11.02	9.76	4.92
Polyvalent passive gears 12-24m	6.61	3.49	18.17	16.82	13.32	10.37
Polyvalent mobile gears <12m	-86.87	-87.47	-22.88	-10.39	3.31	-3.27
Polyvalent mobile gears 12-24m	13.49	13.57	7.42	4.25	24.97	8.02
Pelagic trawl and seine 12-24m	11.15	-6.33	34.4	43.54	38.89	20.42
Pelagic trawl and seine 24-40m	37.3	3.17	42.68	69.47	63.58	23.69
Pelagic trawl and seine >40m	18.49	17.66	-19.03	-17.94	3.03	0.97
Beam trawl 12-24m	0.64	7.63	13.38	14.92	22.52	13.97
Beam trawl 24-40m	-10.61	0.31	31.72	57.73	53.81	21.36

Note: Dredgers <12m and 12-24m have been merged into one fleet because only a few are below 12m.

The outlook of 2007 and 2008 is expected to be influenced by a lot of trade as a consequence of the introduction of an individual Quota (IQ) system for the most of the Danish fleet. Where the fishermen previously have hesitated to take decisions caused by the uncertainty of the new future, the implementation of IQ in 2007 is expected to entail more activity in the trade with vessels. This is a good deal opportunity for both owners of older vessels and of modern efficient vessel. The seller gets a lot of money for a scrapped vessel, because of the quotas, linked to the vessel and the buyer get a higher gross cash flow to pay the fixed costs (it is necessary to buy new quota shares (old vessels) in order to optimize the landings of the more efficient vessels, as a consequence of lower EU-quotas). The vessel buy up's are therefore thought to affect the profit positively.

The fuel prices have increased a lot in 2008, which of course will have a negative effect on gross cash flow, gross value added and profit. This will affect the fuel consuming fleets mostly, such as beam trawlers and demersal and pelagic trawlers, giving a comparative advantage to Danish seine, gill nets and other fleets using passive gear.



### 6.3.2. *Fleets of special interest*

#### *Pelagic trawl and seine >40m*

This fleet consists of 47 vessels of which 9 are purse seiners that mainly catch Atlantic herring and mackerel, and the rest is trawlers that mainly target industrial fish like sandeel and sprat. These vessels operate in the North Sea and the Norwegian Sea and they generated a total income of 111 mln Euro in 2006, which was an increase of 8% from the year before, and corresponds to 27% of the total catch value of Danish fleet.

Introduction of individual transferable quotas (ITQ) on herring and mackerel have significantly increased the capital value for this fleet due to investments in quotas purchased from fishermen leaving the business, and investments in new vessels, that has been build using legal capacity and fishing rights from other purchased vessels and ITQ's. Both the ITQ system and the allocation of shares of all quota species to each vessel have initiated a change in the fleet structure towards fewer but bigger vessels, which is underlined by the fact that only 35 of the vessels in this fleet had a regular production period (registered more than six months) during 2006. The remaining 12 vessels are vessels which may only have been active a few days or weeks of the year. The share of less active vessels in this fleet has the result that the effort (measured as number of days at sea) per vessel decreases from 234 in 2003 to 156 days at sea per vessel in 2006.

	2003	2004	2005	2006
<i>Costs and earnings (per vessel)</i>				
INCOME (1,000 EUR)	1,683	1,721	2,421	2,869
CASHFLOW (1,000EUR)	421	430	948	1,152
PROFIT (1,000 EUR)	-42	-96	375	500
VALUE ADDED (1,000 EUR)	905	922	1,538	1,847
<i>Other economic indicators (per vessel)</i>				
EMPLOYMENT (FTE)	7.4	7.1	7.0	8.1
CAPITAL VALUE (1.000 EUR)	3,532	3,003	4,473	7,039
EFFORT DAYS (1.000)	243	207	186	156
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1,000 t)	379	419	389	414
FLEET (number)	42	48	46	47
FLEET GT (1,000)	25	30	30	31
FLEET KW (1,000)	45	59	62	67

#### *Pelagic trawl and seine 24-40m*

The pelagic trawlers and seiners 24-40m had the second highest income of the 13 vessel fleets with a total of 72 mln Euro. This fleet has severely been reduced in numbers from 129 vessels in 2003 to only 75 vessels in 2006 as a consequence of the allocation of fishing rights to the vessel owners. The concentration of capacity and quotas on fewer larger units have given increase in the income per vessel and turned over the last three years negative profit to a small positive net profit in 2006.

	2003	2004	2005	2006
<i>Costs and earnings (per vessel)</i>				
INCOME (1,000 EUR)	668	603	695	955
CASHFLOW (1,000EUR)	66	30	71	211
PROFIT (1,000 EUR)	-129	-168	-108	17
VALUE ADDED (1,000 EUR)	303	250	311	508
<i>Other economic indicators (per vessel)</i>				
EMPLOYMENT (FTE)	5.5	5.1	5.2	5.1
CAPITAL VALUE (1,000 EUR)	1,259	1,191	1,202	1,171
EFFORT DAYS (1,000)	252	225	234	275
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1,000 t)	377	355	243	208
FLEET (number)	129	124	100	75
FLEET GT (1,000)	32	31	24	18
FLEET KW (1.000)	77	74	59	45

#### *Demersal trawl and seine 12-24m*

The number of vessels in this fleet has been reduced, from 350 in 2003 to 271 in 2006, and the negative profit has also been diminished although not eliminated. Total income for the fleet was 64 mln Euro in 2006. These vessels are primarily targeting cod, Nephrops and plaice in the North Sea, Skagerrak, Kattegat and the Baltic Sea. Some vessels are also engaged in industrial fishery targeting Sprat. The Demersal trawlers and seiners 12-24m includes only vessels up to 18 metres as all vessels above 18 metres are either in the pelagic or in the polyvalent fleets (PTS or PMP).

	2003	2004	2005	2006
<i>Costs and earnings (per vessel)</i>				
INCOME (1,000 EUR)	182	175	201	236
CASHFLOW (1,000EUR)	3	-7	9	33
PROFIT (1,000 EUR)	-28	-42	-22	-2
VALUE ADDED (1,000 EUR)	104	91	112	141
<i>Other economic indicators (per vessel)</i>				
EMPLOYMENT (FTE)	2.2	2.3	2.2	2.0
CAPITAL VALUE (1,000 EUR)	205	228	223	231
EFFORT DAYS (1,000)	121	118	119	106

<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1,000 t)	69	77	76	61
FLEET (number)	350	317	286	271
FLEET GT (1,000)	11	11	10	9
FLEET KW (1,000)	64	57	51	49

## 6.4. Estonia

### 6.4.1. National fleet

The Estonian national fleet has four main fleets: 1) Atlantic distant fisheries, 2) Baltic trawlers 12-24m, 3) Baltic trawlers 24-40m, and 4) Baltic coastal small-scale fisheries using passive gears. In addition to that there are a few larger gill-netters catching cod in the southern Baltic (in 2007 only one). Trawlers target herring and sprat as well as small quantities of cod. In coastal fisheries, the most important species by value is herring, followed by perch, flounder and smelt. The distant (Atlantic) fishery consists of less than 10 vessels; the main fished species is shrimp in NAFO areas.

The size of the national fleet has decreased permanently in all fleets since the least profitable vessels have stopped fishing. As the average age of vessels is high, the fishing enterprises may encounter problems in renewing their fleet in coming years. The profitability of the coastal fisheries was very high after the fall of the Soviet Union due to the low costs and high fish prices (pikeperch, perch) in European market. However, as the fish prices have remained the same and costs grown year by year, the profitability has been deteriorating steadily. This has resulted both in a decline in the number of fishermen and in increasing importance of other sources of income in their households.

#### Basic data total national fleet

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)			32.96	33.45
VALUE ADDED (mln EUR)			9.91	8.43
CASHFLOW (mln EUR)			3.81	0.73
PROFIT (mln EUR)			-5.91	-2.61
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)			998	920
CAPITAL VALUE (mln EUR)			39.62	30.76
EFFORT DAYS (1000)			9.61	8.46
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)			93.80	86.08
FLEET (number)*			1,042	1,036
FLEET GT (1000)*			25.24	24.95
FLEET KW (1000)*			64.02	63.91

<i>Average characteristics of vessels</i>				
GT			24.22	24.08
KW			61.44	61.69
AGE			17.55	18.30

Note: \* includes inactive vessels.

### Production and prices

The Estonian fishing sector has undergone significant changes during the period of regained independence. Coastal fishery resources were exploited in full already in the first half of the 1990s and trawl fishing reached its maximum in 1997. During the last 10 years, fish prices have increased considerably less than fishing-related costs and average salaries in the country, which has deteriorated the situation in the fisheries sector. Since 1998, the economic importance of the fisheries sector has been in a constant decline, as the sector's development has been considerably inferior to that of other economic sectors.

In spite of the small size of the country the Estonian four main fishing fleets are rather different by targeted species and their markets. While Baltic trawlers sell most of their catch (low value pelagic species like herring and sprat) in Ukraine and Russia (as raw or processed fish), the coastal fishing fleet targets mainly more expensive species for the domestic and EU market. Distant fishing vessels target almost entirely shrimp, which is processed on vessel and sold outside from EU. Therefore, it is not possible to describe the trends in weight, value and prices in general for the entire national fishery. The catches of the coastal sector have been fairly stable concerning more valuable species; the fluctuations in the weight of catch have been caused mainly by the herring pound net fishery which is responsible for the bulk of catch weight but not the bulk of catch value. The prices in the distant fishing fleet are set by the world market. The catches in the trawling fleet have been fluctuating much without clear trend, mainly due to the varying catches of sprat. Price has been low, but is slightly increasing.

### **Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Northern prawn			12.38	9.64			18.39	14.96			1.49	1.55
European sprat			54.50	46.66			5.52	5.72			0.10	0.12
Atlantic herring			21.88	23.21			2.41	2.85			0.11	0.12
Atlantic redfish nei			0.62	1.07			1.30	1.87			2.10	1.74
European perch			0.69	1.12			1.07	1.76			1.56	1.58
Greenland halibut			0.67	0.35			2.50	1.23			3.75	3.54
Patagonian grenadier				0.52				0.68				1.32
Atlantic cod			0.57	0.64			0.80	0.64			1.41	1.00
Antarctic rockcods				0.40				0.41				1.02
Roundnose grenadier				0.36				0.39				1.07
Other species			2.49	2.12			0.96	1.86			0.39	0.88

### Composition by fleet

Baltic vessels 12-24m and 24-40m target the same species employing pelagic trawls and are rather analogous in history and in the development of the economic performance. Coastal small scale fishery and Atlantic trawlers, however, are very different in history, economic performance and structure. Most of the employment in terms of total number of people engaged in national fisheries (around 2,500) is employed in the fleet of coastal fisheries. Nevertheless, if measured in the terms of FTE, the figure is much smaller, around 300 FTE. Since this fleet provides employment in remote coastal areas, it is in general considered to be socially very important. Distant fisheries employ rather small number of people, but due to large efficient vessels, expensive target species (mainly shrimp) and large volume of catches, this fleet creates the bulk of revenue in the Estonian national fisheries. Their contribution to the national economy is however somewhat smaller since the catch is landed entirely outside of Estonia and thus this fleet do not provide raw material to the Estonian fish processing industry. Moreover, substantial part of the labour force does not have Estonian citizenship and some vessels are owned mainly by foreign capital.

#### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW	Employment (FTE)	Gross value added (mln EUR)
Coastal small scale fishery <12m	9.28	3.09	879	15.06	305	1.78
Baltic trawlers 12-24m	1.61	0.20	15	2.01	60	0.02
Baltic trawlers 24-40m	61.92	8.41	55	15.29	385	-0.42
Atlantic (distant) trawlers >40m	13.27	20.98	7	14.32	170	7.05

#### Trends and outlook

The outlook for 2007 is not promising, first of all due to the increasing fuel price. In the coastal sector, however, there was a fish price increase which might partly compensate increase in the fuel price. In the Atlantic sector the number of active vessels decreased from 7 to 6, weight of landings increased by 4.5% and the days at sea by 11%. Hence, this fleet showed more efficient use of the existing vessels. In the sectors of Baltic trawlers the landings have increased remarkably and the fish price rose as well. The catch per unit effort has remained at the same level as in previous year.

#### **Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
Coastal small scale fishery <12m	-9.7	19.9			511.1	32.9
Baltic trawlers 12-24m	-19.3	-32.5	42.5	246.6	197.3	39.1
Baltic trawlers 24-40m	16.2	-3.1	36.4	-174.6	-158.2	51.5
Atlantic (distant) trawlers >40m	12.3	12.4	22.7	11.5	8.3	30.0

#### *6.4.2. Fleets of special interest*

The Atlantic distant fleet over 40m and the Baltic trawlers 24-40m are the most important fleets in terms of value of landings. The latter is also most important by the number of employees (in FTE), while the second most important in terms of fishermen is coastal small scale fishery.

#### *Coastal small-scale fisheries*

This fleet operates at the coastal Baltic Sea up to depths of 20 metres. The coastal small scale fishery employs around 2,500 fishermen. However, the great majority of these are part-time fishermen receiving only relatively small share of their total income from fishery. The fleet employs almost entirely passive gears: trap nets and gill nets. Few fishermen use seiners to target flounder. The most important targeted species by value of the catch in 2006 were perch, herring, pikeperch, flounder, smelt and garpike.

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)			2.13	3.09
VALUE ADDED (mln EUR)			0.29	1.78
CASHFLOW (mln EUR)			-0.87	0.22
PROFIT (mln EUR)			-5.01	1.78
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)			300	305
CAPITAL VALUE (mln EUR)			3.80	3.61
EFFORT DAYS (1000)			Unknown	Unknown
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)			7.76	9.28
FLEET (number)			881	879
FLEET GT (1000)			1.77	1.76
FLEET KW (1000)			15.00	15.01
<i>Average characteristics of vessels</i>				
GT			2.01	2.01
KW			17.02	17.13
AGE			16	17

#### *Trawlers 24-40m*

The trawlers 24-40m represent the most important fleet of the Estonian fishing fleet in the Baltic Sea. Historically this fleet has been made mostly of Soviet MRTK-type vessels. During the last years, however, the importance of used vessels bought from Western Europe has steadily increased. Fishing trips are usually 1-3 days long depending on location of the homeports and seasons. In the Estonian economic zone the fishery is directed at sprat and herring, both being used mainly for human consumption.

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)			7.77	8.42
VALUE ADDED (mln EUR)			0.72	-0.42
CASHFLOW (mln EUR)			-1.73	-4.20
PROFIT (mln EUR)			-4.95	-7.16

<i>Other economic indicators</i>				
EMPLOYMENT (FTE)			378	385
CAPITAL VALUE (mln EUR)			8.17	7.16
EFFORT DAYS (1000)			6,285	4,993
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)			68.53	61.92
FLEET (number)			89	83
FLEET GT (1000)			9.53	8.97
FLEET KW (1000)			22.77	21.69
<i>Average characteristics of vessels</i>				
GT			107.10	108.10
KW			255.81	261.31
AGE			29	30

#### *Atlantic (distant) trawlers >40 m*

The Estonian distant water fishing fleet consisted of almost 100 vessels at the end of the Soviet period in 1991. In 2001 the total number was 16 and in 2006 only 7. The vessels are exclusively trawlers, which target mainly shrimp and process the catch on board. The bulk of the catch is taken from NAFO and minor part from NEAFC areas. The main export destinations for the shrimps are Iceland, Norway, Japan and Canada.

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)			24.70	21.58
VALUE ADDED (mln EUR)			8.89	7.05
CASHFLOW (mln EUR)			6.52	4.80
PROFIT (mln EUR)			4.44	3.15
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)			232	170
CAPITAL VALUE (mln EUR)			26.30	18.65
EFFORT DAYS (1000)			1.76	1.26
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)			15.18	13.27
FLEET (number)			9	7
FLEET GT (1000)			11.50	9.17
FLEET KW (1000)			18.78	14.32
<i>Average characteristics of vessels</i>				
GT			1277.4	1309.8
KW			2087.0	2045.6
AGE			25	26

## 6.5. Finland

### 6.5.1. National fleet

In 2006 there were 3,608 registered vessels in the Finnish fishing fleet, although not all of them were considered to be commercially active. Furthermore, while there were many fishermen, not all of them earned enough from the fishing industry to be considered as commercial fishers. In 2006, there were 255 fishing units with income higher than the threshold level (9,134 euro) required to be classified as commercial. However, these fishers accounted for over 90% of the total volume of landings.

The fleet is divided into trawlers, offshore passive gear fleet and coastal vessels. Pelagic trawlers dominate the fisheries in terms of volume and value, catching Baltic herring and sprat. Traditional offshore gillnet fishing is gradually disappearing due to the restrictive management decisions. Small-scale coastal fisheries remain to be an extremely important part of Finnish fisheries in socio-economic terms. They employ many fishermen even though their share of catches is small.

Improved quotas for pelagic species have provided better fishing opportunities. Increased revenues partnered with a declining fleet size have improved the economic performance of the fleet during the past years, despite the significant increase in fuel prices. In 2006, there were 255 active fishing units (with the revenue over the threshold level) with a total of 420 fishermen (engaged crew members). The total volume of landings reached 100 thousand tons and valued 24.5 mln Euros. The fleet generated gross value added worth in the region of 11.8 mln Euros. The fleet was profitable and showed profits of 2.5 mln Euros. However, this was mainly due to the fact that there was no imputed wages for the coastal vessels fleet.

#### Basic data total national fleet

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	19.8	22.0	20.6	24.5
VALUE ADDED (mln EUR)	9.9	10.8	10.5	11.8
CASHFLOW (mln EUR)	4.6	5.2	5.9	6.1
PROFIT (mln EUR)	0.6	0.5	2.9	2.5
<i>Other economic indicators</i>				
EMPLOYMENT	462	618	408	420
CAPITAL VALUE (mln EUR)	21.4	22.9	11.8	17.0
EFFORT DAYS (1000)	43.7	49.1	35.7	40.9
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	72.5	87.1	84.7	100.0
FLEET (number)*	285	330	242	255
FLEET GT (1000)*	8.4	9.9	7.5	8.1
FLEET KW (1000)*	49.2	56.0	39.0	40.3



<i>Average characteristics of vessels</i>				
GT	29.3	30.1	30.8	31.8
KW	173	170	161	158
AGE	21	21	22	21

Note: \* includes only active vessels with income over the threshold. In 2006, there were a total of 3,608 vessels in the fishing vessel register.

### Production and Prices

Landings of herring and sprat have increased significantly during the past few years. Due to the opposite trend in price development the total value of these pelagic species have remained reasonably stable. However, there have been marked increases in the catch value of these species since 2005. Catches of most other species have been decreasing during the past few years, in particular cod catches. The value of other species has decreased along with catches.

#### **Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Herring												
Sprat												
Pike-perch												
European whitefish												
Salmon												
Cod												
Others												

### Composition by fleet

The pelagic trawler fleet is the most important fleet in Finnish fisheries, accounting for some 70% of the total value of landings and over 90% of the catches, mainly Baltic herring and sprat. In 2006, there were 49 trawlers that were divided into two fleets: those that were below 24m and those that were over 24 metres. The production has been heavily concentrated during these last few years with the largest 20 vessels accounting for 70% of total catches. These vessels generated 7.2 mln Euros gross value added that is 60% of the total while their employment was just some 16% of the total. The production of smaller trawlers was used for industrial purposes and their production value was 2.5 mln Euros, equating to as little as 10% of the total, while the landing volume reached 25% of the total.

In 2006, there were close to 200 coastal vessels that were considered commercial. The fleet employed two thirds of the total commercial fleet. Their income was 6.7 mln Euros of which they produced 3.1 mln Euro gross value added. In 2006, there were only 13 active offshore vessels left targeting salmon and cod. This used to be an important fishery. However, nowadays these vessels are gradually disappearing due to the poor cod stock situation combined with the adoption of the driftnet ban which was implemented at the beginning of 2008. The production value of the fleet was only 0.8 mln Euro generating 0.3 mln Euro value added.

#### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
Drift and fixed net 12-24m	0.2	0.8	13	2.7	27	0.3
Polyvalent passive gear <12m	5.2	6.7	193	13.8	274	3.1
Pelagic trawlers 12-24m	23.9	2.5	29	7.7	49	1.3
Pelagic trawlers 24-40m	70.7	14.6	20	16.1	69	7.2

### Trends and Outlook

Average income in pelagic fleets increased significantly from 2005 to 2006. The results reveal the concentration of the fleet. Large vessels increased their production as well as their efficiency. Average income for smaller trawlers followed the same trend but their increase in efficiency was simply due to a decrease in the number of vessels. Average results for coastal vessels show deterioration. This is mainly due to the fact that the number of vessels considered to be commercial increased in 2006.

### **Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
Drift and fixed net 12-24m	-19	-27	-19	-30	-28	-13
Polyvalent passive gear <12m	-9	-10	-13	-27	-24	-39
Pelagic trawlers 12-24m	16	13	-3	-9	14	12
Pelagic trawlers 24-40m	29	24	61	63	34	40

The pelagic catches continued to improve in 2007. For coastal fishery, the situation was mixed. European whitefish catches increased, while pikeperch and perch catches decreased. The average fuel price was the same in 2007 and 2006, but in 2008 this has increased to a record high level. Prices in 2007 were higher for all major species. Taking account of these issues the economic situation in the pelagic sector continued to improve in 2007, but further increases in fuel prices will compromise the development. To begin with, the driftnet ban will challenge the future of the offshore driftnet and gillnet fleet. Coupled with the poor cod stock situation, the future of the remainder of this fleet looks bleak. The development of the coastal fleet will most probably continue as before however, there may be a gradual decrease in the number of fishermen.

### *6.5.2. Fleets of special interest*

#### *Pelagic trawlers 24-40m*

In 2004 there were 20 active vessels in this fleet. The trawler fleet has experienced a significant structural change during the last few years. The production has been heavily concentrated to larger vessels, especially those that have invested in RSW (Refrigerated Sea Water) technology. The fleet accounted for 70% of total landings. While the bulk of the Baltic herring and sprat go for industrial purposes, the catch of these vessels are mostly used for human consumption.

For this fleet the average income has increased significantly and reached 730 thousand Euros in 2006. The profitability has increased with the efficiency resulting in the fleet making a profit.

	2003	2004	2005	2006
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<i>Costs and earnings per vessel</i>				
INCOME (1000 EUR)	361.5	395.4	565.6	730.0
CASHFLOW (1000 EUR)	40.5	45.0	108.9	132.0
PROFIT (1000 EUR)	-45.5	-50.0	21.7	18.0
VALUE ADDED (1000 EUR)	172.0	179.2	276.7	361.0
<i>Other economic indicators</i>				
EMPLOYMENT	3.2	3.4	3.6	3.5
CAPITAL VALUE (1000 EUR)	262.5	171.3	148.9	131.0
EFFORT DAYS	86	74	131	105
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	35.4	52.8	51.5	70.7
FLEET (number)	20	24	18	20
FLEET GT (1000)	4.1	5.5	4.6	5.8
FLEET KW (1000)	13.4	17.0	12.5	16.1

#### *Pelagic trawlers 12-24m*

The development of the smaller trawler fleet has been opposite to the larger one. The total value of landings has halved during the past few years. However, the fleet size has decreased at the same speed and the average landings value has remained approximately at the same level. The profitability has improved in terms of Gross cash flow, but it was not high enough to cover the opportunity cost of capital.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000 EUR)	82.3	77.7	74.7	86.9
CASHFLOW (1000 EUR)	10.8	14.7	16.8	19.0
PROFIT (1000 EUR)	-8.4	-5.8	-2.1	-1.4
VALUE ADDED (1000 EUR)	42.8	45.3	41.1	44.8
<i>Other economic indicators</i>				
EMPLOYMENT	1.8	1.8	1.8	1.7
CAPITAL VALUE (1000 EUR)	150.3	210.6	120.3	340.7
EFFORT DAYS	52	52	68	81
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	30.8	24.4	27.8	23.9
FLEET (number)	64	53	38	29
FLEET GT (1000)	2.8	2.6	1.8	1.3
FLEET KW (1000)	17.5	14.7	10.8	7.7

#### *Drift and fixed net vessels*

Offshore vessels fishing with gillnets have traditionally been a very important part of Finnish fisheries but nowadays these vessels are gradually disappearing. In 2006, there were 13 active vessels in this fleet. The average income has decreased by over 40% since 2003. The productivity has decreased with income. The fleet was making losses after calculating opportunity cost of capital. Together with the driftnet ban and poor cod stocks in the Baltic Sea, this fleet will most likely disappear.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000 EUR)	102.3	82.7	72.4	58.5
CASHFLOW (1000 EUR)	13.1	11.3	15.9	9.2
PROFIT (1000 EUR)	-1.5	-6.7	4.1	-4.6
VALUE ADDED (1000 EUR)	38.5	34.0	28.2	20.0
<i>Other economic indicators</i>				
EMPLOYMENT	2.4	2.3	2.2	2.1
CAPITAL VALUE (1000 EUR)	413.8	414.7	204.7	283.1
EFFORT DAYS	68	58	54	54
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	0.6	0.6	0.4	0.2
FLEET (number)	13	15	17	13
FLEET GT (1000)	0.4	0.5	0.4	0.4
FLEET KW (1000)	2.7	3.3	3.5	2.7

## 6.6. France

### 6.6.1. National fleet

In 2006, there were 4,741 active vessels in the French fleet (excluding Corsica and overseas). These 4 741 vessels included: 3,526 vessels belonging to the Atlantic area and 1,215 vessels belonging to the Mediterranean area.

The French fleet offer great diversity, 74% of the vessels is less than 12 meters, and only 1% of the vessels above 40 meters. The fishing gear most commonly used by those vessels are drift nets and fixed nets (26%), demersal trawl and seiner (20%), pots and traps (10%), gears using hooks (8%) and dredges (7%).

The 4,741 vessels are divided into 26 fleets that are subject to an assessment of economic indicators.

The largest fleets are: drift and fixed nets less than 12 meters (22%), demersal trawl and seiner from 12 to 24 meters (10%), pots and traps less than 12 meters (10%) and vessels using hooks less than 12 meters (8%).

The fleets are rather heterogeneous due to the variety of the “metiers” exercised in the area. Furthermore, the distribution of vessels according to their length is very marked by the rule in safety. Therefore, the distribution of vessels from 24 to 40 meters is not uniform, where about 70% of the vessels belonging to this class are between 24 and 25 metres.

Between 2003 and 2006, the 4,741 vessels of the French fleet have steadily declined (-2% per year), which has translated into a reduction in capacity (-3% per year) and in total horse power (-3% per year). The trend of these reductions is fairly regular. The average characteristics of the fleet changed a little. There is a decrease in the average horse power of the vessels in the fleet since 2004. This is due to a structural effect because of greater reduction in fleet development in the fleet of the most powerful vessels.

Over the period, the overall economic situation has deteriorated in the fishing sector. Thus, the profit decreases (-13% per year), cash flow (-2% per year) and value added (-1% per year). The increase in the value of landings (+2% per year) does not compensate for the increased operating costs including those related to fuel and as well as the financial costs of companies in the sector.

There has been a decline in production capacity with little change in the average characteristics of vessels. The activity decreases in time and employment. Income has made little progress and does not compensate for the increased costs and the financial costs of vessels.

#### Basic data total national fleet

	2003	2004	2005	2006**
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	900.08	881.40	904.39	941.77
VALUE ADDED (mln EUR)	691.46	672.00	679.2	672.22
CASHFLOW (mln EUR)	194.3	188.61	202.03	184.75
PROFIT (mln EUR)	56.58	46.79	63.4	37.14
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	13,960	13,402	13,648	13,462
CAPITAL VALUE (mln EUR)	1,432.6	1,437.04	1,423.38	1,540.25
EFFORT DAYS (1000)	952.84	880.83	885.71	853.32
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	539.9	513.09	511.93	553.41
FLEET (number)*	5,054	4,875	4,810	4,741
FLEET GT (1000)*	207.44	193.84	191.45	190.73
FLEET KW (1000)*	857.71	832.53	808.07	790.77
<i>Average characteristics of vessels</i>				
GT	41.05	39.76	39.8	40.23
KW	169.71	170.78	168.00	166.79
AGE	21.66	21.85	22.19	22.3

Note: \* includes 3,526 active vessels with 661 GT (1000) and 169 kW (1000) belonging to Atlantic area and 1,215 active vessels with 129 GT (1000) and 213 kW (1000) belonging to Mediterranean area.

\*\* Provisional data. The data does not include the indicator of fleet with less than 10 vessels.

#### Production and prices

Between 2003 and 2006, most of the prices of the main species increased. However, this rise did not compensate the decline of the weight of landing. The income increased marginally in real price and this increase is very heterogeneous between fleets.

The evolution of the prices is more positive to the vessels less than 12 meters using passive gears since these vessels benefit from species and market effects.

On the other hand, the target species of demersal trawlers and seiners meet stronger competition with imported products and the evolution of the prices is disadvantageous.

#### **Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Anglerfishes nei	17.19	17.74	17.76	16.99	75.62	81.97	88.28	88.66	4.4	4.62	4.97	5.22
Common sole	6.58	6.34	6.73	6.53	67.23	67.43	74.25	77.94	10.21	10.64	11.04	11.94
Yellowfin tuna	93.58	90.56	70.23	64.33	84.62	78.91	74.68	75.01	0.9	0.87	1.06	1.17
Great Atlantic scallop	17.01	21.93	24.83	24.5	45.8	53.78	58.34	61.33	2.69	2.45	2.35	2.5
Norway lobster	5.91	5.02	5.78	5.36	47.51	42.92	48.57	49.72	8.04	8.54	8.41	9.27
European hake	10.38	9.8	11.74	9.87	44.97	43.31	48.42	42.08	4.33	4.42	4.12	4.26
European seabass	3.11	3.13	4	4.17	27.24	28.88	35.4	38.43	8.75	9.23	8.84	9.21
Skipjack tuna	60.59	61.17	52.63	50.74	35.02	39.52	33.3	34.7	0.58	0.65	0.63	0.68
Cuttlefish;bob tail squids nei	12.53	15.15	10.1	11.38	20.87	23	18.2	25.71	1.67	1.52	1.8	2.26
Atlantic cod	9.32	6.51	4.78	7.34	27.58	18.26	16.44	25.19	2.96	2.81	3.44	3.43
Other species	303.7	275.74	303.35	352.2	423.63	403.41	408.5	422.99	1.39	1.46	1.35	1.2

#### Composition by fleet

Most of the employment is divided on a large number of vessels whose crew is generally less than 5 workers. However, it should be noted that the concentration of jobs is very important in the fleet of pelagic trawlers and seiners over 40 meters. Indeed, it collects 7% of employment while it attended less than 1% of the vessels in the fleet.

More than half of value added by the fishing sector is the fact: the demersal trawl and seiner from 12 to 24 meters (18%), pelagic trawls and seiners over 40m (14%), drift and fixed nets less than 12 meters (11%), drift and fixed nets from 12 to 24 meters (6%) and pots and traps less than 12 meters (6%). As for employment, a distinction can be made between two fleet profiles. There are a number effect for the drift and fixed nets less than 12 meters and a volume effect for pelagic trawls and seiners over 40 meters.

**Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
Drift and fixed nets <12m	8.41	47.99	1 035	91.09	2 048	74.33
Drift and fixed nets 12-24m	10.16	56.89	159	37.92	702	41.62
Drift and fixed nets 24-40m	4.67	18.79	19	9.54	236	12.80
Drift and fixed nets >40m	0.47	1.94	1	1.47		
Dredges <12m	13.22	20.57	199	20.36	427	17.48
Dredges 12-24m	20.17	42.14	127	32.51	586	29.16
Demersal trawlers and seiners <12m	8.08	32.15	329	36.74	685	31.13
Demersal trawlers and seiners 12-24m	73.19	243.56	493	164.13	2 282	123.71
Demersal trawlers and seiners 24-40m	37.23	97.37	117	57.12	640	35.59
Demersal trawlers and seiners >40m	37.51	64.78	13	23.48	264	15.67
Pots and traps <12m	14.01	30.74	466	34.39	915	38.36
Pots and traps 12-24m	3	7.7	21	5.09	116	6.49
Gears using hooks <12m	2.82	17.49	373	32.98	568	27.05
Gears using hooks 12-24m	1.29	3.34	11	2.32	38	2.25
Gears using hooks 24-40m	1.46	4.76	10	5.41	124	5.25
Other mobile gears <12m	0.42	7.04	261	14.9	313	11.98
Polyvalent mobile gears <12m	5.78	7.02	90	8.46	158	7.82
Polyvalent mobile gears 12-24m	5.51	11.08	37	8.51	141	8.05
Polyvalent mobile gears 24-40m	1.65	3.1	10	3.71	56	3.43
Other passive gears <12m	0.93	2.03	263	13.62	377	7.71
Polyvalent passive gears <12m	0.92	4.59	267	17.06	389	12.76
Polyvalent passive gears 12-24m	0.5	2.5	6	1.77		
Combining mobile and passive gears <12m	6.29	15.08	209	20.7	416	15.62
Combining mobile and passive gears 12-24m	1.24	2.98	11	2.58	42	2.02
Pelagic trawlers and seiners <12m	0.64	1.25	15	2.09	59	1.75
Pelagic trawlers and seiners 12-24m	34.55	41.87	107	32.37	614	29.08
Pelagic trawlers and seiners 24-40m	9.2	6.69	47	21.43	282	17.53
Pelagic trawlers and seiners >40m	249.2	143.86	38	87.01	987	93.59
Beam trawlers <12m	0	0	1	0.08		
Beam trawlers 12-24m	0.69	1.64	5	1.25		
Beam trawlers 24-40m	0.19	0.82	1	0.66		

Trends and outlook

Between 2005 and 2006, the economic situation of most fleets deteriorated. The total income as the total value added progresses as little. The evolution of economic indicators is very influenced by the evolution of the structure of the population. Hence, the variation of the number of vessels and number of the days at sea in the fleets explains most of the variation of economic indicators.

**Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
Drift and fixed nets <12m	-0 .01	-6 .95	0 .59	-3 .59	-1 .48	2 .32
Drift and fixed nets 12-24m	0 .9	-6 .79	67 .78	58 .11	-2 .11	3 .86
Drift and fixed nets 24-40m	-1 .39	-10 .53	1 .3	-6 .81	-6 .57	3 .14
Drift and fixed nets >40m		-18 .75				
Dredges <12m	-4 .7	-10 .44	-18 .84	-16 .67	0 .07	0 .23
Dredges 12-24m	4 .08	-7 .25	2 .45	-4 .76	-0 .34	6 .14
Demersal trawlers and seiners <12m	8 .63	17 .68	8 .51	4 .25	-2 .55	-1 .09
Demersal trawlers and seiners 12- 24m	7 .69	2 .3	9 .77	7 .52	7 .89	5 .6
Demersal trawlers and seiners 24- 40m	9 .69	1 .76	15 .05	16 .9	21 .58	12 .28
Demersal trawlers and seiners >40m	42 .26	91 .23	31 .53	0 .44	-1 .63	12 .61
Pots and traps <12m	12 .65	0 .11	20 .18	26 .06	6 .57	3 .96
Pots and traps 12-24m	-0 .53	-4 .03	9 .68	13 .74	12 .4	16 .03
Gears using hooks <12m	4 .68	34 .27	9 .9	6 .38	-3 .27	0 .17
Gears using hooks 12-24m	-17 .1	13 .89	9 .08	24 .75	24 .55	15 .14
Gears using hooks 24-40m		100 .57				
Other mobile gears <12m	-7 .01	84 .63	-6 .88	-11 .86	-11 .23	-3 .54
Polyvalent mobile gears <12m	-12 .43	30 .24	1 .34	-7 .77	-3 .53	8 .46
Polyvalent mobile gears 12-24m	7 .06	9 .3	6 .12	2 .21	0 .42	1 .59
Polyvalent mobile gears 24-40m		-34 .13				
Other passive gears <12m	0 .36	90 .23	15 .16	8 .02	-6 .09	1 .28
Polyvalent passive gears <12m	-14 .21	27 .81	-20 .47	-19 .99	-13 .39	-3 .13
Polyvalent passive gears 12-24m		25 .94				
Combining mobile and passive gears <12m	-3 .86	-36 .88	-14 .55	-18 .04	-10 .93	-8 .31
Combining mobile and passive gears 12-24m	-7 .11	-15 .28	-13 .74	-23 .62	-25 .68	-12 .36
Pelagic trawlers and seiners <12m	-6 .43	-45 .08	23 .68	28 .65	-2 .58	-1 .03
Pelagic trawlers and seiners 12- 24m	-1 .67	20 .61	-1 .66	-5 .22	-1 .05	-1 .66
Pelagic trawlers and seiners 24- 40m	1 .7	-33 .92	0 .7	-2 .77	5 .63	2 .94
Pelagic trawlers and seiners >40m	7 .8	5 .13	9 .24	-8 .2	-9 .98	4 .3
Beam trawlers <12m		-99 .95				
Beam trawlers 12-24m		50 .2				
Beam trawlers 24-40m		-9 .39				



With the increase of the price of diesel, the situation of the most important fleets will continue to deteriorate. Many of these fleets are the most exposed in term of competition. Furthermore, the impact on the employment also risks being rather important.

The number of vessels will be reduced and practice will also change. So, to reduce the weight of fuel cost, vessels more often stay close to shore in order to decrease the fishing trip.

#### 6.6.2. *Fleets of special interest*

##### *Drift and fixed nets < 12m*

The fleet of vessels less than 12 metres using drift and fixed nets is the most important of the French fleet in the Atlantic and in the Mediterranean area. The number of these vessels has increased. Their economic situation improved between 2003 and 2005 and deteriorated slightly between 2005 and 2006. The main target species are sole, angelfish and European sea bass.

Between 2003 and 2006 the average value of income increased slightly (+2.5% per year) and it is stagnating between 2005 and 2006. This situation is due to the increase of price of the target species. The volume of landings rose slightly between 2003 and 2005, and fell between 2005 and 2006. It should be noted that the price of the target species as common sole, anglerfishes and surmullet have increased. However, between 2005 and 2006, production costs and financial charges increased faster than income. Thus during this period value added, cash flow and profit decreased while they continued to see progress since 2003.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)	105.65	109.79	113.90	113.88
CASHFLOW (1000EUR)	19.46	20.79	22.47	19.59
PROFIT (1000EUR)	6.88	9.94	12.46	8.34
VALUE ADDED (1000EUR)	69.96	72.54	74.94	71.82
<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE)	1,962.17	1,971.60	2,034.41	1,978.74
CAPITAL VALUE (1000EUR)	72.91	73.37	71.86	97.19
EFFORT DAYS	191.92	183.67	185.20	184.09
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (t)	7.51	7.77	8.73	8.13
FLEET (number)	978	986	988	1035
FLEET GT	4.90	4.93	5.07	4.88
FLEET KW	87.02	86.98	88.35	88.01

##### *Demersal trawl and seine 12-24m*

The demersal trawl and seiner from 12 to 24 meters is the second largest fleet of the French fleet in terms of number of vessels, the first in terms of value added and for employments. The economic situation of this fleet is deteriorating. About 90% of the vessels belong to the Atlantic area. The main target species are angelfish and Norway lobster.

Between 2003 and 2006, the number of vessels decreased steadily (-6% per year). Over the period, the income by vessel progressing (2.3% per year) under the combined effect of increased volumes by ship and the prices of certain target species: Angler fish, Norway lobster, cuttlefish and common sole. The decrease of the number of vessels also contributed to this increase. However, the situation in this fleet continues to deteriorate under the increased operating costs including those related to fuel. The weight of the cost of fuel reached 20% in 2006. Between 2003 and 2006, the added value decreased (-2% per year), cash flow (-5%) per year. Profit has been negative since 2004 and continues to deteriorate. Confirmation of this trend would lead to a weakening of this fleet of the fleet as well as employment.

This fleet is particularly exposed in variation of exogenous element as the price of the diesel or the price of the imports.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)	515.00	527.42	511.34	550.67
CASHFLOW (1000EUR)	70.10	66.56	53.17	60.22
PROFIT (1000EUR)	6.87	-3.68	-3.79	-4.36
VALUE ADDED (1000EUR)	269.66	264.62	237.88	250.93
<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE)	4.71	4.78	4.73	4.63
CAPITAL VALUE (1000EUR)	735.03	730.15	721.15	725.82
EFFORT DAYS	220.34	218.46	217.73	213.61
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (t)	143.20	144.10	145.13	148.46
FLEET (number)	594	546	515	493
FLEET GT	78.40	80.81	83.86	84.75
FLEET KW	322.24	325.49	332.04	332.92

#### *Pelagic trawl and seine >40m*

The pelagic trawls and seiners over 40 meters are poorly represented in the national fleet: the fleet represents less than 1% of the vessels. But this fleet participates in a significant portion of: the value and volume of landings, the value added and the employment. This fleet is also very heterogeneous because it consists of pelagic trawlers and tropical seiners.

Between 2003 and 2006, the number of vessels in the fleet is stable. Over the period, the income by vessel increased (6% per year). Between 2003 and 2006 the situation worsened in the fleet, largely due to the very strong increase of the fuel costs. The added value which had increased between 2003 and 2005 thanks to a modernisation of vessels in the fleet decreased (-9%) between 2005 and 2006. The cash flow and profits were accelerating the deterioration in the end of the period. Confirmation of this trend would lead to a weakening of this fleet of the fleet as well as jobs.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)	4,661.05	5,058.11	5,148.48	5,550.00
CASHFLOW (1000EUR)	830.00	895.14	1,098.79	762.89
PROFIT (1000EUR)	242.37	254.05	448.18	87.89
VALUE ADDED (1000EUR)	2,336.32	2,492.16	2,718.79	2,462.89
<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE)	24.89	24.35	25.79	25.97
CAPITAL VALUE (1000EUR)	7,346.05	8,012.97	8,133.94	8,438.16
EFFORT DAYS	272.89	280.00	273.94	270.53
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (t)	6,135.00	6,211.62	6,238.18	6,557.89
FLEET (number)	38	37	33	38
FLEET GT	1,378.95	1,404.59	1,445.76	1,332.63
FLEET KW	2,412.11	2,413.78	2,446.06	2,289.74

## 6.7. Germany

### 6.7.1. National fleet

The total value of landings of the German fleet increased from €209 mln in 2005 to €216 mln in 2006 with the total weight going up by 7,000 tonnes to 259,300 tonnes. 2,154 fishing vessels were flying the Germany flag – a decrease by 64 vessels. The segment of passive gear below 12 meters accounts for almost half the fleet in terms of numbers (1,014 vessels). However, only about 1/3 of this segment reported catches (11,500 tonnes altogether), the other ones (684) can be regarded as inactive. 11,500 tonnes of fish were reported as catch by this segment. More than half of the total catch (about 150,000 tonnes) was landed by the pelagic trawlers. Other important segments in terms of quantity are demersal trawlers (66,900 tonnes) and beam trawlers (21,500 tonnes).

The main catch areas are the North Sea (IV) with about 80,000 tonnes and the Baltic Sea (III) with about 73,000 tonnes. The other catches were reported mainly from Northeast Atlantic areas. Almost 1/3 of the total catch weight was herring (80,600 tonnes), followed by blue whiting (36,400 tonnes) and sprat (30,800 tonnes), whereas most value was created from common shrimp (€8.9 mln) and cod (€33.0 mln).

On average, landings, value of landings and effort days have steadily increased, while the number of vessels as well as related capacity indicators decreased from 2004 onwards. The number of inactive vessels has constantly decreased, partly due to reactivating and partly due to scrapping. The number of active vessels below 12 meters using fixed gear has constantly increased. The effort of vessels between 8 and 12 meters has even increased by 40% from 2005 to 2006. The number of demersal trawlers and beam trawlers decreased every year by 13-14 vessels altogether. The number of pelagic trawlers remained almost constant over the years.

Employment data are not for all years and fleet segments available at the same quality. Therefore numbers are biased and do not allow for a trend statement.

**Basic data total national fleet**

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)		178.5	209.2	216.5
VALUE ADDED (mln EUR)		148.1	163.2	155.2
CASHFLOW (mln EUR)		125.2	130.6	111.6
PROFIT (mln EUR)		116.9	122.5	105.9
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)		2,133	1,923	1,712
CAPITAL VALUE (mln EUR)		17.3	17.3	29.5
EFFORT DAYS (1000)	75.0	71.8	79.5	93.1
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)		240.5	137.0	261.8
FLEET (number)*	2,314	2,263	2,228	2,154
FLEET GT (1000)*	69.1	67.7	71.8	65.1
FLEET KW (1000)*	170.9	166.9	171.3	163.3
<i>Average characteristics of vessels</i>				
GT	29.9	29.9	32.2	30.2
KW	73.8	73.7	76.9	75.8
AGE	24.8	25.2	25.4	25.7

Note: \* includes 939/900/830/725 inactive vessels with 8,016/2,475/6,813/6,062 GT and 24,114/13,940/17,952/17,905 kW

**Production and prices**

The main phenomenon referring to landings and prices is a constant increase in first sale prices for all species of importance for the German fleet. In total value, common shrimp has remained the most important species, followed by cod and herring. Brown shrimp is only caught by beam trawlers; cod is caught predominantly by demersal trawlers, and herring mostly by pelagic trawlers. Common shrimp is not under a quota, and therefore the variation between years can be explained by the reproductivity. All other species of importance are under a quota, which is usually entirely exploited.

The total value of catch per species varies every year, which means that a decrease in total catch is usually not completely compensated by an increase in price per kg and vice versa. In other words, increasing prices per kg do not necessarily result in a stable income. The increase in total value landed by the German fleet was not generated from the most important species, but from others, like pollock, blue whiting or redfish. It was the demersal trawler segment which benefited mostly from this increase. Beam trawlers, on the other hand, suffered from significantly lower catches with prices having only moderately increased.

**Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006

Common shrimp		16.6	19.2	16.0		32.0	44.6	37.9		1.92	2.32	2.37
Atlantic cod		11.5	12.6	12.3		27.6	31.5	33.0		2.40	2.51	2.68
Atlantic herring		68.8	88.9	80.6		19.7	30.4	29.3		0.29	0.34	0.36
Atlantic mackerel		23.5	19.1	16.7		14.1	15.2	15.1		0.60	0.79	0.91
Saithe(Pollock		9.1	10.9	12.3		6.7	9.9	14.8		0.74	0.91	1.20
Greenland halibut		3.8	3.8	3.2		14.6	13.9	13.4		3.83	3.66	4.15
Blue whiting		15.3	22.8	36.4		3.2	4.6	9.2		0.21	0.20	0.25
Atlantic redfishes		1.9	2.0	3.1		4.5	5.6	8.9		2.39	2.81	2.86
European plaice		3.8	3.4	3.7		6.8	6.8	7.5		1.80	2.01	2.05
Blue mussel		17.9	10.8	5.2		11.0	9.4	7.1		0.61	0.87	1.38
Others		68.3	59.1	72.4		38.4	37.3	41.1		0.56	0.63	0.57

### Composition by segment

The value of total catch increased considerably for the demersal trawlers, but decreased for beam trawlers from 2005 to 2006. The number of pelagic trawlers remained almost constant over the years, while the landings increased considerably since 2004 in both weight and value.

The value of total catch increased noticeably for the demersal trawlers, but decreased for beam trawlers from 2005 to 2006. This refers only to the 12-24 meter vessels which represents the largest length class of beam trawlers.

The total catch of vessels below 12 meters using fixed gear does not show a clear trend. The number of active vessels in that segment has constantly increased, with the effort data for vessels between 8 and 12 meters having increased by a remarkable 40%.

There are a small number of dredgers, of which the number and catches vary from year to year, depending on the growing conditions for the target species, blue mussel.

### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
Dredges 12-24m	1.6	4.5	19	3.2		
Demersal trawls <12m	1.2	0.8	9	1.6		
Demersal trawls 12-24m	18.0	18.1	73	14.8		
Demersal trawls 24-40m	33.0	20.6	17	8.5		
Demersal trawls >40m	14.8	40.1	7	14.1		
Polyvalent mobile gear	3.1	2.7	8	2.1		
Passive gear other <12m	11.5	9.6	1,014	24.6		
Passive gear other 24-40m	0.6	2.4	4	1.3		
Polyvalent passive gear <12m	0.6	0.5	7	0.9		
Pelagic trawls >40m	153.5	64.3	13	22.7		
Beam trawl <12m	0.2	0.5	24	1.2		
Beam trawl 12-24m	16.8	38.9	223	41.7		
Beam trawl 24-40m	4.6	13.5	11	8.8		

Please note that some fleet segments contain a small number of vessels, for confidentiality reasons, they are presented together with similar segments. Segments are merged as follows:

Segment name	Represents
DFN VL1224	DFN VL1224, DFN VL2440
DTS VL2440	DTS VL2440, DTS VL40XX
TBB VL2440	TBB VL2440, TBB VL40XX
PTS VL40XX	PTS VL0012, PTS VL1224, PTS VL2440, PTS VL40XX
PGO VL2440	FPO, PGO, HOK: all VL
MGP VL1224	MGP , DRB: all VL
PMP VL0012	PMP VL0012, PMP VL1224

## Trends and outlook

### **Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
Dredges 12-24m	-12.1	-27.05	6.94	1.94	-56.58	-24.67
Demersal trawl <12m	30.29	17.3	18.37	-406.45	-170.4	-56.33
Demersal trawl 12-24m	15.91	4.29	25.86	46.63	-10.36	-26.57
Demersal trawl 24-40m	26.84	11.91	25.64	27.35	-3.72	-31.7
Polyvalent mobile gear	-58.88	-46.94	-93.43			
Passive gear other <12m	0.71	-9.46	-41.86			
Passive gear other 24-40m	45.1	-50.98	29.47			
Polyvalent passive gear <12m						
Pelagic trawl >40m	19.99	19.45	15.33			
Beam trawl <12m	-6.89	-9.27	0.05			
Beam trawl 12-24m	-16.29	-14.03	-13.85	-44.38	-55.54	-34.97
Beam trawl 24-40m	37.61	0.82	36.04			

### *6.7.2. Fleets of special interest*

The pelagic trawlers contribute the bulk of catches of the German fleet. However, for confidentiality reasons the number of vessels and owners in this segment is too small for presentation and discussion of more detailed data. Most value of landings was generated by demersal trawlers, pelagic trawlers and beam trawlers. The smaller coastal vessels using passive gear are important in total numbers, but they contributed only €9,600 to the total value of landings. The cost dataset which is available for this segment is insufficient for a multi-annual comparison.

#### *Beam trawlers*

The German beam trawlers represent more than half the number of active vessels, leaving aside the small (<12m) passive gear vessels. They catch about 20% of the total value, but are also an important tourist attraction at the North Sea shore. The drop in income from 2005 to 2006 deriving from lower catches is much more critical than increases of any cost item. The shrimp first market in Germany is very particular because of its oligopoly structure: only two companies count for about 90% of the trade volume, therefore price formation is strongly biased. There is no reasonable alternative fishery for beam trawlers. The quota for flatfish is too low to provide a reasonable source of income.

#### *Demersal trawlers*

The demersal trawlers represent about 1/4 of the number of active German vessels (without small fixed netters) and caught more than 1/3 of the total value in 2006, which is the highest value for a specific gear. This group of vessels is quite flexible, can operate in different areas and can switch between target species. This provides some independence from biased or monopoly markets or from quota drops for a certain species. Income could constantly been increased from previous years to an extent which allowed to cover rising costs. Demersal trawlers mainly fish in the North Sea and in the Western Baltic. A few vessels of this segment target sprat with pelagic gear in the Eastern Baltic until March and then switch to demersal gear in the North Sea and Western Baltic.

#### *Pelagic trawlers*

In 2006, the pelagic trawler fleet consisted of 13 vessels, accumulated over all length classes. This segment represents more than 10% of the gross tonnage of the German fleet and is the largest segment with respect to this parameter. Pelagic trawlers increased the value of landings by more than 10% from 2005 to 2006. The pelagic fleet operated in a wide range of areas, from the Norwegian Sea to Mauritanian waters, with the main catches in the North Sea and the waters west of Scotland and Ireland. Main target species in terms of weight and value were herring, blue whiting, mackerel, horse mackerel, sardine and sprat.

#### *Small vessels using passive gear*

The segment of vessels < 12m using passive gear represents the bulk number of the German fleet. They operate almost exclusively in the Baltic Sea and are often operated on a sideline basis. Thus the total catch and value landed by this segment are comparatively low (9,600 t and €9.6 mln). Main target species are herring and cod. In the Bodden waters, some freshwater species were caught. This segment is labour-intensive, and when imputing a salary for the owner, fishing activities in this segment are merely profitable. However, these vessels are located in structurally weak areas, and therefore the employment effect is of particular importance. Moreover, these vessels provide local markets with fresh fish, which is of some importance for the tourist branch.

### **6.8. Greece**

No text available, please see Appendix 3 for tables.

## **6.9. Ireland**

### *6.9.1. National fleet*

In 2006, Ireland's national fishing fleet comprised of 1,414 vessels, landing 223,000 tonnes of fish with a value of €173mln. This compares with 373,400 tonnes and a value of €152 mln in 1995. The fleet base their activity in the Irish Sea, Celtic Sea and the Atlantic, mainly targeting pelagic species, demersal species, and shellfish.

The number of vessels registered in the national fleet has declined in the period 2003 - 2006. This is due to major restructuring in the past decade in the form of two renewal schemes; the Whitefish Renewal Scheme and the Fleet Development Measure, which have resulted in the introduction of new and modern second-hand vessels into the fleet and the withdrawal of older and generally smaller vessels. Additionally, 130 vessels have been modernised and many more have undergone safety upgrades. The 2005 decommissioning scheme also incentivised the removal of older vessels from the fleet, with the permanent removal of 3,178 tonnes from the register in the form of over 18 meter polyvalent vessels.

Major sectors in the Irish fleet in 2006 include the:

**Polyvalent sector** – accounting for 85% of the vessels in the fleet and 48% of the capacity. This sector targets traditional whitefish species (monkfish, megrim, haddock, whiting, cod, and Nephrops), a limited quantity of pelagic species, and inshore non-quota shellfish stocks. Included in this sector are the inshore <12m fleet, the 12-24m coastal fleet, the near shore 18-24m fleet, and the >24m offshore fleet.

**Pelagic sector** - accounting for 2% of the vessels in the fleet, 44% of the capacity, and 33% of national production. This fleet exclusively targets pelagic species, including mackerel, herring, horse mackerel and blue whiting.

**Beam trawl sector** – accounting for 1% of the vessels in the fleet and 2% of the capacity.

This sector mainly targets flatfish species, particularly sole, plaice, megrim and monkfish.

**Specific sector** – accounting for 9% of the vessels in the fleet and 10% of the capacity. Vessels range in size from 6 to 44 metres overall length, and engage in dredging for bivalve molluscs (e.g. mussels, scallop, and razor clams).

In 2006, the Irish fleet had an estimated profit of €12 mln. This is an increase from estimated net losses in 2004 and 2005. Estimated cash flows have been positive and rising in the period 2004 – 2006, indicating that the fleet is operating at an increasing profit year on year, but that these increases are being countered by rising capital costs.

The fleet's fishing effort has declined in the period 2003 – 2006. This is due to the reduction in Ireland Total Allowable Catch (TAC) of quota species, the reduced fleet size and the use of more efficient fishing techniques, which minimise fuel use, to compensate for the rises in fuel prices over this period.

#### **Basic data total national fleet**



	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	167.99	178.49	180.95	173.64
VALUE ADDED (mln EUR)		118.52	107.36	126.1
CASHFLOW (mln EUR)		13.62	23.2	36.28
PROFIT (mln EUR)		-3.26	-5.07	12.27
<i>Other economic indicators</i>				
EMPLOYMENT (TOTAL)	4,509	4,288	4,035	3,994
INVESTMENT (mln EUR)	599.17	435.12	469.22	431
EFFORT DAYS (1000)	143.24	140.76	131.41	122.93
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	268.91	284.3	275.99	223.75
FLEET (number)	1,592	1,516	1,433	1,414
FLEET GT (1000)	86.49	85.81	85.33	86.25
FLEET KW (1000)	228.91	223.8	212.06	214.61
<i>Average characteristics of vessels</i>				
GT	54.33	56.6	59.54	61
KW	143.79	147.63	147.98	151.78
AGE	26.67	27.25	27.12	26.62

Note: \* includes all inactive vessels.

### Production and prices

The below table illustrates Ireland's landings weight, value and prices for the reference period 2003 – 2006. The total landing of the Irish fleet has declined over the past decade. With key demersal stocks in a poor state, Ireland's quota for these species has fallen by 41% from 1997-2006. Pelagic landing have also been in decline with landings of the main pelagic species, mackerel, having decreased over the period. Market prices for mackerel peaked in 2005, with no further increases in 2006. Due to reduced landings of this species and the static price, the value of mackerel landing has decreased on 2005 but remains the most valuable species to the Irish fleet. Other pelagic species such as Horse Mackerel and Atlantic Herring have experienced slight price increases over this period, but have also levelled off in 2006.

Landings of Nephrops increased in 2005 and decreased in 2006, while the price increased 94% over the period 2003 – 2006, making Nephrops the second most valuable species to the Irish fleet. There has been a consistent decline in the landings of crab, with a consistent increase in price of crab, thus the value of crab production has remained static over this period. Megrim, anglerfish and whiting all show steady increases in price and value over this period. The volume landed of other species has fallen over this period, while prices remained static up until an increase in 2006. The value of production of these other species has decreased over the 4-year period.

Market prices for many species have seen increases over the period 2003 – 2006. However, these increases are in nominal term, therefore national inflation may have equalled or outweighed these price increases. Thus, any interpretation of these figures must take account of national and international economic conditions such as, national inflation rates, currency exchange rates and prices of other food stuffs (see the Fish Prices chapter for more details).

**Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Atlantic mackerel	67.48	61.16	45	40.83	33.71	27.49	42.75	38.88	0.5	0.45	0.95	0.95
Norway lobster	6.82	6.79	7.11	6.33	10.04	12.94	17.61	18.06	1.47	1.91	2.48	2.85
Edible crab	11.46	13.68	9.96	9.84	10.22	12.5	11.31	13.44	0.89	0.91	1.14	1.37
Anglerfishes nei	1.29	1.75	2.6	3.23	3.77	5.23	7.95	11	2.92	2.99	3.06	3.41
European lobster	0.66	0.85	0.69		8.24	10.65	8.97	9.22	12.54	12.49	12.92	
Atlantic herring	28.84	26.25	29.43	33.15	4.85	5.14	6.22	7.2	0.17	0.2	0.21	0.22
Megrims nei	2.67	2.61	2.42	2.07	7.05	7.99	7.52	6.81	2.64	3.06	3.11	3.28
Blue whiting	22.59	58.43	69.65	54.91	2.26	4.53	7.66	6.04	0.1	0.08	0.11	0.11
Jack and horse mackerels nei	28.45	8.9	19.32	23.93	3.82	1.56	4.83	5.98	0.13	0.18	0.25	0.25
Whiting	5.31	4.81	6.06	4.94	3.6	3.78	5.73	5.27	0.68	0.79	0.95	1.07
Other species	93.34	99.07	83.75	38.67	80.43	86.66	60.39	51.73	0.86	0.87	0.72	1.34

**Composition by fleet**

The Irish fishing fleet is diverse, with many different types of fishing techniques and gears being utilised. The fleet is split into fleets based on; the fishing activity, the gear used and the size of the vessels. Below is an overview of each fleet in the Irish fleet in 2006.

The combined mobile and passive gears (00 –12m) fleet (the Inshore Fleet) comprised of 1,032 vessels (73% of the fleet), representing 5% of the total tonnage of the Irish fleet. This fleet employed 1,905 full-time and part-time crew, thus accounting for almost 50% of the total engaged crew. The fleet is primarily comprised of potters, with <12m trawlers and dredgers also included. The estimated Gross Value Added (GVA) is €50mln, the largest of any Irish fleet.

Pots and traps fleets accounted for 2% of the vessels in the national fleet. This fleet combined with the majority of the inshore fleet - who partake in potting - highlight the importance of this activity to national production.

Demersal trawl and seiner fleets accounted for 30% of the total tonnage, 28% of total employment, and 34% of the value of national production.

Dredger fleets accounted for 4% of the fleet's vessels and 8% of the total tonnage. Dredgers (24 – 40m) had an estimated GVA of €17.8mln. These fleets mainly target bivalve molluscs (e.g. mussels, scallop, and razor clams).

Pelagic trawl and seiner fleets accounted for 2% of the fleet's vessels and 44% of the total tonnage. The fleets landed 68% of the volume of landings, equating to 33% of the value of landings.

Other fleets included drift and fixed nets, beam trawler, polyvalent passive, and gears using hooks. Although small in numbers, they contributed significantly to national production, employment, and the sustainability of coastal communities.

**Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln)
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						EUR)
Drift and fixed nets 12-24m	1.77	2.51	22	4.66	92	
Drift and fixed nets 24-40m	1.51	0.84	5	2.15	32	
Dredgers 12-24m	0.81	1.47	28	4.73	97	
Dredgers 24-40m	0.25	0.74	30	13.14	142	17.83
Dredgers >40m	0.08	0.03	5	3.47	20	
Demersal trawl and seine 12- 24m	24.47	40.03	161	44.94	732	14.67
Demersal trawl and seine 24- 40m	11.44	18.84	41	25.69	342	
Demersal trawl and seine >40 m	0.25	0.43	2	2.79	26	
Pots and traps 12-24m	2.57	2.98	24	4.1	90	
Pots and traps 24-40m	1.42	1.52	2	0.96	20	
Gears using hooks 12-24m	0.01	0.01	2	0.44	6	
Gears using hooks 24-40m	0.57	1.3	2	1.1	13	
Polyvalent passive gears 12-24m	0.07	0.21	5	0.49	12	
Combined mobile and passive gears <12m	23.42	37.93	1,032	36.51	1,905	49.95
Pelagic trawl and seine 24-40m	30.55	13.71	13	9.11	112	20.05
Pelagic trawl and seine >40m	121.85	43.15	18	44.14	236	23.61
Beam trawl 12-24m	0.36	1.06	8	2.14	37	
Beam trawl 24-40	2.13	6.42	12	10.14	70	
Beam trawl >40m	0.21	0.49	2	3.89	10	

### Trends and outlook

In 2006, the Irish volume of landings decreased by approximately 20% on 2005. This reduction can be identified in many fleets of the fleet, with most notable reductions in landings seen in the dredgers (24-40m) and demersal trawl and seiner larger than 40 m. Total income of the fleet has declined from 2005. This is most notable in the demersal trawl and seiner (12-24m) and pelagic trawl (24-40m) fleets, with a reduction of 23% and 11% respectively. In contrast, the combined mobile and passive gears (<12m) and pelagic (larger than 40 m) fleet's incomes have increased by 43% and 13% respectively.

Income per day at sea and GVA per day at sea in the pelagic trawl and seiner (24-40m) fleet increased from 2005. This is due to a number of factors such as reduced effort in 2006 and more efficient fishing techniques. The return from each FTE and the crew share per FTE increased in 2006 by 4% and 7% respectively. This highlights the increased payment per day at sea to the crew for increased productivity. These same trends are seen in the pelagic fleet larger than 40 m.

The demersal trawl and seiner (12-24m) fleet has seen a reduced income per vessel from 2005, along with a reduced income and GVA per day at sea. Reasons for these reductions could include overcapacity and reduced quotas. The 2008 whitefish decommissioning scheme aims to reduce capacity in this fleet thereby increasing profitability.

### **Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
Drift and fixed nets 12-24m		-32				

Drift and fixed nets 24-40m		3				
Dredgers 12-24m		68				
Dredgers 24-40m		-72				
Dredgers >40m						
Demersal trawl and seine 12- 24m	-23	-3	-15	-35	-41	-36
Demersal trawl and seine 24- 40m		-11				
Demersal trawl and seine >40 m		-49				
Pots and traps 12-24m		12				
Pots and traps 24-40m		-15				
Gears using hooks 12-24m		-95				
Gears using hooks 24-40m		42				
Polyvalent passive gears 12-24m		24				
Combined mobile and passive gears <12m	43	36	41	182	184	124
Pelagic trawl and seine 24-40m	-11	-31	29	50	4	7
Pelagic trawl and seine >40m	13	-27	29	66	45	28
Beam trawl 12-24m		-38				
Beam trawl 24-40		-9				
Beam trawl >40m		-32				

The 2005 decommissioning scheme failed to significantly remove the targeted capacity from the whitefish fleet. A new scheme introduced in 2008 has set out to take 11,000 GTs off the Irish register. This scheme has given greater incentives to vessels over 18m to leave the fleet. If this scheme is successful the remaining vessels in the whitefish fleet will work in an improved economic environment with increased quotas per vessel. Along with this it has been recommended that an industry led quota management regime for whitefish and pelagic fish be introduced, to effectively manage the available resource and to ensure an environmental and economic sustainable industry.

After a slight rise in pelagic quotas in 2007, Ireland's allocation has been reduced in 2008 to below 2006 levels. The mismatch between capacity and quota in these fleets will mean a further reduction of effort in 2008. These fleets will have to concentrate on maximising their fishing efficiency for each day at sea in order to minimise cost, such as fuel costs, and to sustain profits. External factors may contribute to market price fluctuation which may apply added pressure to profit margins.

#### 6.9.2. *Fleets of special interest*

##### *Demersal trawl and seine 12-24m*

The very poor state of many key demersal stocks is reflected both in the annual total allowable catch and quota allocations that Ireland receives and in the declared landings of the fishing fleet over the past decade. From a high in 1997, Ireland's share of the key demersal stocks has fallen from 55,470 tonnes to 32,662 tonnes in 2006, a fall of 41%. Landings also have declined by some 33% over this period, from 48,000 tonnes in 1997 to just 32,331 in 2004.

The demersal trawl and seiner (12 – 24m) fleet is reliant on demersal species and has seen a reduction in vessel numbers in the past four years. This has been, in part, due the Whitefish Renewal Scheme, Fleet Development Measure and a decommissioning scheme introduced in 2005. These schemes have resulted in the introduction of new and modern second-hand vessels and the removal of older smaller vessels. Another decommissioning scheme, to be introduced in 2008

targeting vessels greater than 18m in length, will aims to remove the overcapacity of the Polyvalent fleet by removing 11,000 GTs from the register. This scheme aims to take enough tonnage out of the whitefish fleet in order to make the fleet economically viable and environmentally sustainable into the future.

In recent years this fleet has seen losses. Contributing factors may include reduced quotas, rising fuel costs (21% of all costs), high capital costs (12% of all costs) and overcapacity in the whitefish fleet. The demersal trawl and seiner (12 – 24m) fleet had an estimated cash flow, in 2006, of €1.6 mln, showing a reduction on previous years. Each vessel, on average, had a Gross value added of €91,000 and a cash flow of €10,000. The positive cash flows indicate that this fleet is operating at a profit but the overall net losses are due to the reduction in the value of their assets in the form of capital costs (depreciation).

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)		433.55	397.66	307.39
CASHFLOW (1000EUR)		24.21	27.49	10.12
PROFIT (1000EUR)		-16.04	-10.48	-31.80
VALUE ADDED (1000EUR)		184.11	154.01	91.12
<i>Other economic indicators per vessel</i>				
EMPLOYMENT	4.56	4.55	4.55	4.55
INVESTMENT (1000EUR)	396.14	613.15	478.50	486.46
EFFORT DAYS	129	145	157	143
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	25	25	26	24
FLEET (number)	215	197	167	161
FLEET GT (1000)	18.14	17.90	15.89	15.29
FLEET KW (1000)	54.40	52.28	45.91	44.94

#### *Pelagic trawl and seine >40m*

The pelagic trawl and seine vessels larger than 40 metres is a modern section of the Irish fleet, with vessels having an average age of 8years in 2006. The number of vessels in this fleet has been increasing over the last number of year and in 2006 comprised of 18 vessels with a total capacity of 33,000 GTs. Along with the increase in the number of vessels, the number of crew employed in this fleet has also increased.

This fleet accounts for 25% of the total Irish fleet's production value and 54% of the volume of landings. In 2006, this fleet has an estimated profit of €3mln and a cash flow of €10.8mln. On average each vessel in this fleet earned €2.4mln in 2006, with a cash flow of €600,000 in the same year.

Mackerel remains the most important species to this fleet and variations of mackerel quota and market prices significantly impact this fleet. While the Irish mackerel quota has dropped sharply over the last number of years from 73,600 tonnes in 2002 to 48,000 tonnes in 2006, this has been offset by significant price increases over the same period, reaching record prices in 2005. However, the market price of mackerel is not determined by TAC of North Atlantic Mackerel alone, with the availability of Pacific mackerel, international exchange rates being examples of other exogenous

factors that affect market prices. Thus, there have been no increases in the average market price of mackerel from 2005 to 2006, leaving the value of mackerel landing in 2006 down on 2005.

Due to the reduction of Irelands TAC of pelagic species, there has been a reduction of effort in this fleet since 2002. The result has been a greater return per day at sea, an increased productivity per crew member and increase return to the crew per day at sea. This activity regime is one of efficiency maximisation and has also led to the minimisation of fuel consumption. The outcome of this reduced effort has been increases in GVA per effort day for the fleet.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)		3,510.71	2,187.78	2,475.00
CASHFLOW (1000EUR)		342.14	347.22	600.00
PROFIT (1000EUR)			-139.44	203.33
VALUE ADDED (1000EUR)		1,560.71	903.89	1,311.67
<i>Other economic indicators per vessel</i>				
EMPLOYMENT	13	13	13	13
INVESTMENT (1000EUR)		8,752.86	6,472.78	7,567.78
EFFORT DAYS	138.46	145.71	85.00	74.44
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	139.57	163.56	167.31	121.85
FLEET (number)	13	14	18	18
FLEET GT (1000)	28.70	29.33	33.44	33.46
FLEET KW (1000)	39.98	40.69	44.20	44.14

#### *Combined mobile and passive gears <12m*

Combined mobile and passive gears (<12m), the “Inshore Fleet”, accounted for 73% of all vessels in the Irish fleet in 2006. This fleet has been declining in size continuously over the 4-year period, 2003 - 2006. The main activity in this fleet is potting, but trawlers and dredgers are also included in this fleet. This fleet employs almost half of the total engaged crew and mainly targets crab and lobster species.

In 2002, an effort management system was put in place after the reform of the CFP. This management system and the establishment of Biological Sensitive Areas (BSA) impose effort limitations on crab and scallop boats; many face restrictions on their normal operating pattern. Overcapacity with the scallop fleet was addressed with the 2005 decommissioning scheme, but this problem persists in the crab fleet. If the fleet operated to its normal capacity, it would greatly exceed its effort allocation. The situation is currently being managed and a more long term approach is being pursued which would aim to strengthen conservation while removing the current artificial effort barrier.

In 2006, it has been estimated that the fleet had a net loss of €300,000 and a cash flow of €2.74mln. On average this is a loss of €290 and a €2,660 cash flow per vessel.

The recorded losses in the below table are due to the large crew costs, which account for 77% of the fleets total income. Due to the nature of this fleet, the majority of vessels are crewed by a single person, the vessel owner, and maybe one other crewmember. The average crew size is 1.8 persons

per vessel. Thus, crew costs represent the return vessel owners receive from vessel activities. The large crew cost and the number of crew employed by this fleet highlight the importance of this fleet to coastal communities around Ireland.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)		36.38	42.02	59.89
CASHFLOW (1000EUR)		-10.38	-3.34	2.66
PROFIT (1000EUR)		-14.03	-6.12	-0.29
VALUE ADDED (1000EUR)		12.92	16.98	48.40
<i>Other economic indicators per vessel</i>				
EMPLOYMENT	1.84	1.84	1.84	1.85
INVESTMENT (1000EUR)	75.85	54.07	67.35	89.67
EFFORT DAYS	74.62	75.85	76.10	76.91
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	29.83	29.06	17.5	23.42
FLEET (number)	1,151	1,100	1,048	1,032
FLEET GT (1000)	4.83	4.51	4.3	4.47
FLEET KW (1000)	37.54	35.76	33.42	36.51

## 6.10. Italy

### 6.10.1. National fleet

The Coverage of the Italian fisheries is 100%. The data represent all the vessels belong to the national fishing fleet.

In 2006, the output of the Italian fishing fleet amounted to 299,534 tonnes, corresponding to an overall turnover of 1.519,34 mln Euro. For the first time since 2000, catches are on the rise over the previous year, with a growth of 17 thousand tons equal to 100 mln Euros. This increase has been driven by the increase in the landings of pelagic species, in particular anchovies, that have kept the average price (5.1 €/kg) almost stable.

This trend has not been able to compensate the increase of operative costs. In particular, fuel cost has increased by 37% in the last three years, with peaks of +56% for the purse seiners and +43% for the trawlers vessels. In any case, the economic performance of the fleet has been quite positive, because the increase in operative costs has been compensated by the increase of total revenues. Total gross value added (GVA) has been equal to 964 mln euro, which means 67 thousands Euro per vessel on average.

Four fleets - demersal trawl (DTS) 12-24m and 24-40m, polyvalent passive gears (PGP) <12m and pelagic trawl and seiners (PTS) - account for almost 80% of the value and 70% of the volume of total landings. The most important species in terms of volume have been anchovies, clams, hakes, sardines and shrimps, which represent 50% of the total national production. The main fishing areas are Adriatic Sea, especially for small pelagic and clams, and Sicily Channel for white and giant red shrimps.

Overall net profit is estimated at 314 mln Euro. The best performance has been achieved by demersal trawl 12-24m with a net profit at 81 mln Euro. The large pelagic trawlers and seiners are the most efficient vessels and generated the highest GVA per vessel and the best performance per fisherman.

The reduction of fishing capacity in the years analyzed (2006/2003) was 13% in terms of number of vessels and 9% as engine power, on average 4% of the vessels every year. The activity of the total national fleet has been equal to about 2 millions days at sea. On average, each vessel has operated 138 days.

The decreasing of capacity has had a negative impact in terms of employment with a losing of thousands of jobs. They were mainly involved vessels less economically efficient and small, in most cases armed with passive gears. This has produced an increase in the average size of vessels (+5% kW) and, in some case, on the average profitability.

The reasons of this reduction are economic but also social. From an economic point of view these vessels, compared with the others fleets generate low GVA/day and consequently low crew share/engaged crewman. The social reasons are linked to a lack of spare generational: young people feel more convenient move towards other sectors, producing a consequent loss of tradition.

**Basic data total national fleet**

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	1,492.46	1,407.83	1,412.91	1,519.34
VALUE ADDED (mln EUR)	976,37	815,94	873,44	964,18
CASHFLOW (mln EUR)	511,65	415,57	476,63	531,99
PROFIT (mln EUR)				314,44
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	38,062	35,195	32,174	26,030
CAPITAL VALUE (mln EUR)				825,05
EFFORT DAYS (1000)	2,438.98	2,208.56	2,026.71	1,985.94
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	329.34	307.1	282	299.53
FLEET (number)*	16,556	15,624	15,112	14,67
FLEET GT (1000)*	198.37	207.9	216.96	211.7
FLEET KW (1000)*	1,328.82	1,271.10	1,251.92	1,213.78



<i>Average characteristics of vessels</i>				
GT			14.36	14.7
KW	80.26	81.36	82.84	84.5
AGE	26.79	28.20	28.54	28.1

Note: The gross tonnage (GT) figures for 2003 and 2004 are not complete, and therefore not showed.

### Production and prices

In 2006, after years of sustained increases, it shows a substantial stability in average prices for production. The national average figure grows by 1.2%, compared to 8% growth recorded in 2005. This trend is attributed to the substantial growth of catches of species with low unit value, in particular, anchovies (+28%), clams (+24%) and sardines (+12%). Indeed, excluding these three species, the average price increases of 8% on an annual basis. Generally, the increase in the landing has not impacted negatively on prices. The most significant price increase was recorded from anchovies and crustaceans (deep-water rose shrimp, giant red shrimp and Norway lobster). It was mainly due to improvement in the methods of conservation on board and on development of new foreign market. Anchovies have also benefited from improvements in the management of the activity, based on the regulation of daily landings under the coordination of Producer Organisation. The increase in the average price of anchovies has led to a significant increase in revenues of pelagic trawlers and seiners, despite an increase in volumes landed. The improvement in the price of crustaceans affected mainly larger demersal trawler.

One exception is represented by clams (although is not present in the table, is one of the most important species landed by Italian fleet) that record a fall in prices (-18%). This was mainly due to competition caused by the product that comes from aquaculture.

### **Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Finfishes nei	45.53	40.02	32.55	27.95	259.11	259.79	222.16	198.49	5.69	6.49	6.82	7.1
European anchovy	53.37	58.6	60.92	78.05	81.67	90.17	91.56	138.89	1.53	1.54	1.5	1.78
European hake	15.42	13.35	14.8	17.87	110.16	95.58	114.25	133.18	7.14	7.16	7.72	7.45
Deep-water rose shrimp	11.55	10.95	12.85	12.92	102.04	86.34	112.82	124.52	8.84	7.89	8.78	9.63
Swordfish	8.4	6.95	7.46	7.63	95.36	82.45	84.61	85.69	11.36	11.86	11.34	11.24
Norway lobster	4.08	4.16	4.32	4.39	67.79	62.59	69.45	78.35	16.61	15.03	16.08	17.85
Common cuttlefish	9.07	8.84	8.3	8.86	68.49	70.51	68.36	75.1	7.55	7.98	8.23	8.47
Marine molluscs nei	11.57	10.98	10.57	11.37	43.59	49.36	45.2	54.7	3.77	4.5	4.28	4.81
Giant red shrimp	1.44	1.75	2.26	2.49	26.11	31.82	41.69	52.22	18.16	18.21	18.42	20.96
Red mullet	13.12	9.98	9.07	8.88	77.5	54.22	51.99	51.8	5.91	5.43	5.73	5.84
Other species	155.8	141.53	118.89	119.13	560.65	525	510.8	526.4	3.6	3.71	4.3	4.42

### Composition by fleet

Four fleet - demersal trawl (DTS) 12-24m and 24-40m, polyvalent passive gears (PGP) <12m and pelagic trawl and seiners (PTS) 12-24m - account for 79% of GVA, 87% of total fleet and 79% of employment. In particular, polyvalent passive gears fleet account for 30% of GVA, 65% of total fleet and 42% of full time equivalent (FTE) representing the most important fleet in social terms.

The pelagic systems have also benefited from an improvement in the management of the activity, based on the regulation of daily landings under the coordination of Producer Organisation. This has led to a significant increase in the price of anchovies (+18%) that combining with an increase in the resource allowed a good economic performance.

The performance of the trawler fleet has remained stable compared to recent years. Volume of landings has not changed but revenues have increased driven by higher average prices. In particular, both landings and prices of giant red shrimps (ARS and ARA) have increased, promoting the improvement of economic performance of larger vessels, specialised in exploiting the high bottoms.

The dredges were the first fishery to apply a system of self management to regulate landing for vessels, obtaining significant benefits in economic performance. These vessels are highly specialized, targeting only clams and operating almost exclusively in Adriatic Sea. The most significant threat for these vessels is represented by the state of the resource, since the clam populations may be subject to drastic decreases. The FTE is low in relation to the number of fishing boats as the activity is performed very close to the coast and is highly mechanized, which is why working hours are reduced. In 2006, production increased in volume but decreased significantly the price.

#### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
DRB 12-24m	21.15	61.77	708	76.12	683	45.13
DTS <12m	2.36	12.79	140	10.24	229	6.36
DTS 12-24m	76.51	539.94	2,443	434.20	7,344	298.9
DTS 24-40m	17.93	162.98	303	120.02	1,893	84.89
DTS >40m	4.63	16.89	22	23.09		
HOK <12m	0.85	7.25	60	6.97	99	5.43
HOK 12-24m	9.24	73.76	335	62.89	1,133	49.06
PGP <12m	45.3	381.42	9,383	257.51	10,809	281.16
PGP 12-24m	4.83	36.84	333	46.55	901	25.25
PMP 12-24m	2.47	11.2	96	12.78	330	7.45
PTS 12-24m	64.44	120.35	369	96.99	1,592	77.61
PTS 24-40m	36.67	62.51	85	34.51	672	44.59
TBB 12-24m	2.55	12.82	56	17.74	190	6.42
TBB 24-40m	1.55	11.11	33	10.49	154	7.34

#### **Trends and Outlook**

The outlook for 2007 is slightly worse, first of all for the fuel price that remained almost stable at the high level of previous year. Volume of landings showed a significant decrease, in particular for some of the most important species like pilchard and white shrimps. This penalizes especially demersal and pelagic trawlers, some of the more profitable fleets in 2006. In these fleets cost of fuel affects revenues for 27%.

#### **Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
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DRB 12-24m	-0.1	19.9	-11.5	-12.9	105.2	101.4
DTS <12m	16.9	-0.1	7.8	26.5	56.9	52.9
DTS 12-24m	14.7	9.4	11.5	11.1	13.7	15.1
DTS 24-40m	8.6	-9.5	12.7	15.7	15.7	17.8
DTS >40m	7.3	2.6	-0.7			
HOK <12m	119.1	134.4	198.7	285.6	234.1	215.0
HOK 12-24m	6.6	13.5	3.9	7.2	21.5	11.2
PGP <12m	10.5	0.9	6.3	10.4	42.5	38.8
PGP 12-24m	18.6	16.9	2.3	10.5	10.8	4.4
PMP <12m						
PMP 12-24m	-14.5	51.3	-12.2	-14.4	-19.5	-14.0
PTS 12-24m	18.0	6.7	12.9	20.5	79.9	75.2
PTS 24-40m	75.4	39.5	72.2	78.8	75.6	60.0
TBB 12-24m	24.8	34.8	34.2	33.4	20.0	17.9
TBB 24-40m	20.2	35.5	13.9	31.7	11.2	-7.4

#### 6.10.2. Fleets of special interest

Demersal trawl 12-24m, demersal trawl 24-40m and polyvalent passive gears <12m are the most important fleets in terms of value of landings and number of employment, accounting 71% of revenues and 77% of FTE.

##### *Demersal trawl 12-24m*

Demersal trawl 12-24m target high value species, in particular white shrimps, hake and red mullet and the average vessels is 178 kW with a crew of three persons.

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	359.54	447.12	496.56	539.94
VALUE ADDED (mln EUR)	210.72	231.23	275.9	298.9
CASHFLOW (mln EUR)	97.1	101.6	140.67	150.53
PROFIT (mln EUR)				81.32
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	6,769	7,570	7,706	7,344
CAPITAL VALUE (mln EUR)				260.46
EFFORT DAYS (1000)	348.25	395.85	403.68	393.71

<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	59.07	76.09	73.76	76.51
FLEET (number)	2,156	2,572	2,576	2,443
FLEET GT (1000)	58.54	74.79	82.3	78.04
FLEET KW (1000)	404.85	443.67	454.51	434.20
<i>Average characteristics of vessels</i>				
GT	27.15	29.08	31.95	31.94
KW	187.78	172.50	176.44	177.73

#### *Demersal trawl 24-40m*

The average vessel of demersal trawl 24-40m is 396 kW with a crew of six persons. They target mainly crustaceans (giant red shrimp, white shrimp and Norway lobster) and hake and the most important fishing grounds are in Sicily Channel.

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	195.66	149.12	159.38	162.98
VALUE ADDED (mln EUR)	115.42	75.16	80.86	84.89
CASHFLOW (mln EUR)	54.48	35.67	41.62	42.95
PROFIT (mln EUR)				3.35
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	2,422	2,173	2,087	1,893
CAPITAL VALUE (mln EUR)				158.8
EFFORT DAYS (1000)	72.36	66.26	61.82	56.08
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	26.67	21.86	21.06	17.93
FLEET (number)	379	361	322	303
FLEET GT (1000)	41.73	46.05	43.1	41.9
FLEET KW (1000)	146.23	145.36	128.24	120.02
<i>Average characteristics of vessels</i>				
GT	110.11	127.56	133.85	138.24
KW	385.83	402.66	398.26	396.11

#### *Polyvalent passive <12m*

Polyvalent passive gears <12m target mainly fish and molluscs using gill-nets and trammel-nets, but they are very adaptive and may change very easily their fishing strategy according to season, market and resource abundance. The average vessel is 27 kW with a crew of 1.2 persons.

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	347.75	340.65	338.88	381.42
VALUE ADDED (mln EUR)	252.42	225.66	240.51	281.16
CASHFLOW (mln EUR)	150.07	133.12	135.65	161.76
PROFIT (mln EUR)				121.88
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	14,952	14,999	13,173	10,809
CAPITAL VALUE (mln EUR)				136.09
EFFORT DAYS (1000)	1,261.68	1,325.38	1,193.96	1,264.66
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	52.18	47.51	44.08	45.3
FLEET (number)	8,788	9,376	9,211	9,383
FLEET GT (1000)	22.85	15.14	16.67	18.13
FLEET KW (1000)	218.84	229.98	234.44	257.43
<i>Average characteristics of vessels</i>				
GT	2.60	1.61	1.81	1.93
KW	24.90	24.53	25.45	27.44

## 6.11. Latvia

No text available, please see Appendix 3 for tables.

## 6.12. Lithuania

### 6.12.1. National fleet

The main Lithuanian fishing areas are the Baltic Sea and Atlantic Ocean (mainly NAFO, NEAFC, Mauritania and Morocco). Due to lack of fishing rights and quotas in North Atlantic, few of Lithuanian fishing vessels started fishing in the Pacific Ocean in 2007. High Sea trawlers are mostly targeted on horse mackerel, mackerel, anchovy, sardinella, sardine, shrimps and red fish. The main target species in the Baltic Sea are cod, herring and sprat.

The Lithuanian fleet was in 2006 composed of 273 vessels, 20 of these had no fishing activity during the year and are considered inactive. These vessels composed about 30% of total GT and 23% KW. According to the data of European Fleet Register in 2004-2006, the Lithuanian fleet has been reduced by almost 18% of GT. The reduction by 2% has been also estimated in 2007.

Due to low cod quota in the Baltic Sea and structural changes, vessels with new, and not common for Lithuanian fleet fishing, techniques are appearing, e.g. vessels using hooks. Pelagic trawlers in the Baltic also become more and more important.

For the purpose of this report only three Lithuanian fleets could be analyzed: demersal trawlers and seiners 24-40m, drift and fixed nets <12m and drift and fixed nets 24-40m.

Due to some differences in the data collection and technical problems with the hardware, the data presented in the table are not very consistent. The number of vessels in 2004 refers only to active in the Baltic Sea vessels during 2004; active in Baltic Sea and Atlantic Ocean in 2005 and total Lithuanian fleet (including active and non active vessels) in 2006. Economic indicators, employment and investment in the table are presented only for main Baltic Sea fleets (Drift nets and fixed nets <12m, demersal trawl and demersal seiner 24-40m and Drift nets and fixed nets 24-40m, but excluding Drift nets and fixed nets 24-40m in 2006). The effort data is provided for only Baltic Sea fleet in 2004-2005 and including High Sea fishery data in 2006. Weight of landings is provided for all fleets maybe excluding some small fleets which are less than 10 vessels in the group fishing in the Baltic Sea.

#### Basic data total national fleet

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)		5.5	5.2	4.5
VALUE ADDED (mln EUR)		3.2	2.8	2.6
CASHFLOW (mln EUR)		2.2	1.2	1.4
PROFIT (mln EUR)		1.9	0.9	1.2
<i>Other economic indicators</i>				
EMPLOYMENT		612	470	526
CAPITAL VALUE (mln EUR)			4.0	3.1
EFFORT DAYS (1000)		11.7	10.6	23.3
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)		151.8	132.1	141.2
FLEET (number)*		246	276	273
FLEET GT (1000)*		6.6	47.3	68.6
FLEET KW (1000)*		16.1	54.3	73.0
<i>Average characteristics of vessels</i>				
GT		26.8	171.3	251.3
KW		65.4	196.6	267.6
AGE		22	22	23

Note: \* includes 20 inactive vessels with 20,334 GT and 16,458 kW in 2006, only active vessels in 2005 and only active in the Baltic Sea vessels in 2004.

#### Production and prices

Cod is the main target fish species in the open Baltic Sea. Value of cod landings in 2006 composed almost 79% of total value of landings of main Baltic Sea fleets. Since 2004, due to reduction of cod quota, the catches of Lithuanian fleet reduced by 15%. Lithuanian accession to the EU as the reduction of volume of landings caused the increase of cod price by almost 58% in 2005. It could be also related to the increased possibilities of Lithuanian fishermen to land the fish in other EU countries and increased competition for raw cod in the internal market among fish producers.

The other important fish species for the Baltic fishermen are herring, plaice and sprat. But due to low price of this fish species in the market they are not as important as cod in terms of income. This

species are usually caught as by-catch or after vessel quota for cod has been exhausted used. There are few Lithuanian vessels targeted on sprat in the Baltic.

Smelt is one of the most important fish species for the coastal fishermen. It composes about 35-45% of value of landings in the coastal area. But volume of landings of smelt has also reduced rapidly during the year 2004-2006 (by more than 50%). The price of this fish species is fluctuating during the years.

For most of the Baltic Sea species high increase of first sale fish price is observed in 2005 and marginal reduction in 2006. This could be connected to the impact of the accession of Lithuania to the EU in 2004 and expectations of consumers about price increase in the internal market.

**Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Atlantic cod		3.34	2.97	2.92		2.94	4.13	4.00		0.88	1.39	1.37
Atlantic herring		1.84	0.74	0.51		0.38	0.21	0.15		0.21	0.29	0.29
European plaice		0.87	0.93	0.34		0.31	0.32	0.12		0.33	0.35	0.36
European smelt		0.28	0.16	0.13		0.22	0.21	0.13		0.78	1.30	0.99
European sprat		6.18	2.52	0.2		0.62	0.25	0.02		0.10	0.10	0.08

Composition by fleet

The number of High Sea vessels was 18 in 2006. They accounted for about 91% of the total fleet GT and about 79% of kW. This is also the most important fleet category in terms of landings and value added. 13 active demersal and pelagic trawlers fishing in Atlantic Ocean caught about 90% of total Lithuanian landings in 2006. But economic performance of this fleet could not be evaluated.

There were three main fleets fishing in Baltic Sea before 2006 – drift nets and fixed nets <12m, demersal trawl and demersal seiner 24-40m and drift nets and fixed nets 24-40m. Due to structural changes during 2004-2006, a lot of vessels, mostly netters were scrapped with the financial support of FIG. Hence, the number of vessels fishing with drift and fixed nets in the open Baltic Sea has been reduced from 19 in 2004 to 5 in 2006. The number of active demersal trawlers has also been reduced from 38 in 2004 to 24 in 2006. According to the statistics of the National Paying Agency, which is responsible for FIG implementation, by the end of 2007, 31 agreements about scrapping vessels have been signed.

**Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment*	Gross value added (mln EUR)
Drift and fixed nets <12m	0.39	0.38	201	4.72	369	0.16
Drift and fixed nets 24-40m	0.42	0.57	5	0.76		
Demersal trawl and seine 24-40m	3.31	3.51	24	5.21	157	1.83
Demersal trawl and seine >40m	4.87		4	5.39		
Pelagic trawl and seine >40m	132.23		9	38.04		

Note: \* number of persons employed

**Trends and outlook**

The positive changes in the productivity of vessels in 2005-2006 are mostly defined by the decrease in number of vessels and by higher quotas per vessel for the open Baltic fishery. The decrease in catch volume and increase of vessel income for the demersal trawl and seine fleet 24-40m shows higher specialization of this fleet on cod fishing. The composition of cod in the landings of this fleet increased from 37% in 2005 to 71% in 2006. Economic performance of the coastal fishery Drift nets and fixed nets <12m fleet, deteriorated in 2005-2006. Income per vessel dropped down per 14%. In 2006 the profit of Drift nets and fixed nets <12m become negative due to total decrease of catches, price for main species and as a result income.

**Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE*	Crew share /FTE*
Drift and fixed nets <12m	-14	5	6.4	-29	-68	-57
Drift and fixed nets 24-40m	44	45	49			
Demersal trawl and seine 24-40m	7	-36	33	39	3	5
Demersal trawl and seine >40m		-28				
Pelagic trawl and seine >40m		14				

Note: \* persons employed

It is expected that income of the fleet drift and fixed nets <12m will be lesser in 2006, due to the decrease of smelt, herring and plaice catches and the increase of fish price will not compensate the loss of catches in 2007. Due to reduced cod quota for 2007, catches of other fleets will also decrease. The decrease of volume of landings of cod could be compensated by higher price in the internal market. In the middle of 2007 fish auction was opened and started its activity. Mainly due to that reason and stopped cod fishery in Poland in the middle of the year 2007, the cod price increased almost by more than 30% during some sales. The increase of fuel price in the beginning of 2008 and further decrease of cod quota in the Baltic could make a negative impact on the economic performance of all Baltic fleets in 2008.

**6.12.2. Fleets of special interest*****Demersal trawl and seine 24-40m***



Demersal trawl and seine 24-40m is the most important fleet in the Baltic Sea mostly targeted on cod fishery. Due to reduction of fleet capacity the total capacity of active vessels in the fleet was reduced by more than 42% of kW. Such a reduction was one of the factors that allowed them to increase average revenues per vessel by 35% from 108 thousand EUR in 2004 to 146 thousand EUR in 2006. The effort per vessel was reduced mainly due to the regulation of fishing effort for cod in the Baltic. But the economic performance of total fleet decreased constantly in 2004-2006. Mainly due to fuel costs and crew costs increase in 2005.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)		108.2	136.7	146.3
CASHFLOW (1000EUR)		57.1	31.0	33.8
PROFIT (1000EUR)		52.4	23.0	27.1
VALUE ADDED (1000EUR)		72.1	68.3	76.3
<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE*)		5.6	6.0	6.5
CAPITAL VALUE (1000EUR)			122.0	118.3
EFFORT DAYS		165	137	110
<i>Capacity indicators per vessel</i>				
LANDINGS WEIGHT		293.95	217.00	137.92
FLEET (number)		38	30	24
Average GT		128	122	125
Average KW		239	214	217

Note: \* average employed persons per vessel

#### *Drift and fixed nets <12m*

The drift and fixed nets <12m fleet is mostly important for people leaving in the coastal areas. It provides some fish for private consumption and resorts along the coast. According to the national rules, about 5% of total Lithuanian quota is given to this fleet. Catches of cod provide almost one third of income of this fleet so the reduction of cod quota could also lead to the reduction of income of this fleet. The economic performance of this fleet has deteriorated since 2004.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)		2.06	2.17	1.87
CASHFLOW (1000EUR)		0.63	0.27	-0.12
PROFIT (1000EUR)		0.58	0.09	-0.22
VALUE ADDED (1000EUR)		1.16	1.40	0.77

<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE*)		1.6	1.0	1.8
CAPITAL VALUE (1000EUR)			1.22	1.14
EFFORT DAYS		21	26	21
<i>Capacity indicators per vessel</i>				
LANDINGS WEIGHT		3.12	1.86	1.94
FLEET (number)		189	221	201
Average GT		2.1	2.6	2.2
Average KW		22.8	24.9	23.5

Note: \* average employed persons per vessel

### *Drift and fixed nets 24-40m*

Drift and fixed nets 24-40m fleet was important for Lithuanian Baltic fleet before the structural changes in 2004-2006. Most of the vessels of this fleet have been scrapped during the first call for scrapping in 2005. After this, the profitability and income per vessel of the fleet increased rather rapidly. This fleet have been targeted only to cod and the increase of volume of landings by almost 100% per vessel has also been influenced by increase of average cod quota per vessel and reduction of capacity of the total Baltic fleet fishing in the open Sea.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)		52.11	78.75	114.59
CASHFLOW (1000EUR)		-7.53	27.50	
PROFIT (1000EUR)		-10.11	20.00	
VALUE ADDED (1000EUR)		14.00	52.50	
<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE*)		5.5	8.4	
CAPITAL VALUE (1000EUR)			2.50	
EFFORT DAYS		77	88	86
<i>Capacity indicators per vessel</i>				
LANDINGS WEIGHT		43.2	57.5	84.0
FLEET (number)		19	8	5
Average GT		70.0	76.3	80.0
Average KW		142.6	152.5	152.0

Note: \* average employed persons per vessel

### **6.13. Malta**

No text available, please see Appendix 3 for tables.

## 6.14. The Netherlands

### 6.14.1. National fleet

Coastal water fisheries are the most important fishery activities in the Netherlands. It accounts for 66% of total value of landings of the Dutch fisheries whereas high sea fisheries accounts for almost 32%. The less active fleet (value of landings per vessel less than 50.000 Euro) is of very low importance in economic perspective (approximately 2% of total value of landings) whereas the inactive fleet (no fishing activity at all) has no economic impact at all.

The main target species of the coastal water fleet are sole, plaice, other flatfish and shrimp while the high sea fleet targets pelagic species like sardinella, blue whiting, herring, mackerel and horse mackerel.

The total value of landings decreased slightly in 2006 to 382 mln Euros and the fleet made a loss of 7 mln Euros. The Dutch fishery sector as a whole did not make any profit in the last four years. In 2006 employment decreased by about 10% and effort by almost 7% compared to 2005.

The size of the Dutch fishing fleet decreased substantially in 2006. At the end of 2005 a decommissioning scheme was introduced for the Dutch cutter fleet which became effective in the beginning of the year 2006. Around 25 big (beam trawl) vessels were scrapped from the vessel register during that period and mainly because of this the total fleet capacity decreased by 14% to 357.000 kW. The average capacity per vessel decreased in 2006 by 10% to 468 kW. As a result of low investments in the last few years, the fleet is becoming older and older and the average age of a vessel increased to 28 years old in 2006.

#### Basic data total national fleet

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	396	377	387	382
VALUE ADDED (mln EUR)	180	155	152	149
CASHFLOW (mln EUR)	70	51	53	48
PROFIT (mln EUR)	-3	-15	-15	-7
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	2,187	2,163	2,093	1,893
CAPITAL VALUE (mln EUR)	390	376	347	312
EFFORT DAYS (1000)	62	61	61	57
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	519	522	545	470
FLEET (number)*	751	791	796	762
FLEET GT (1000)*	179	186	179	161
FLEET KW (1000)*	410	421	414	357

<i>Average characteristics of vessels</i>				
GT	239	235	225	211
KW	546	532	521	468
AGE	24	26	26	28

Note: \* Figures include inactive and less active vessels: in 2006 there were 172 inactive and 194 less active vessels with a total of 22,000 GT and 58,000 kW.

### Production and prices

Total landings of fish by the Dutch fleet decreased in 2006 by 75,000 tonnes. Landings of pelagic species like blue whiting, herring and sardinella decreased by 90,000 tonnes whereas the landings of Chilean mackerel were first introduced in 2006 (34,000 tonnes).

The most important species in terms of value were sole, plaice and shrimp. Prices of sole steadily increased the last few years. Prices of plaice and shrimp remained almost constant during the period 2003-2006. Averages prices of all pelagic species were slightly higher in 2006 except prices for mackerel.

### **Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Common sole	12.6	12.9	10.9	8.3	108.5	109.6	110.3	102.2	8.6	8.5	10.1	12.3
European plaice	28.5	25.1	23.0	24.0	56.5	44.6	43.5	47.0	2.0	1.8	1.9	2.0
Common shrimp	14.8	14.2	15.9	15.6	33.1	30.0	38.0	36.9	2.2	2.1	2.4	2.4
Blue whiting	57.3	77.2	128.4	96.1	13.2	15.5	29.1	28.4	0.2	0.2	0.2	0.3
Jack and horse mackerels nei	75.6	86.2	75.4	71.7	24.5	27.6	23.2	27.6	0.3	0.3	0.3	0.4
Atlantic herring	98.0	133.3	128.0	95.9	28.6	37.4	30.7	24.4	0.3	0.3	0.2	0.3
Turbot	1.9	1.8	1.9	1.9	16.7	15.0	16.5	17.3	8.8	8.4	8.7	9.4
Chilean jack mackerel				33.8				16.1				0.5
Round sardinella	102.9	55.6	70.5	45.4	31.7	16.6	20.2	13.0	0.3	0.3	0.3	0.3
Atlantic mackerel	29.3	27.5	25.1	24.2	17.6	18.0	17.6	12.8	0.6	0.7	0.7	0.5
Other species	98.3	87.8	66.1	52.9	65.8	60.3	52.7	50.5	0.7	0.7	0.8	1.0

### *Coverage and reliability*

For the first time, in this report, the presented figures do not make any distinction between inactive, less active or active vessels. This means that for several fleets the reliability of the figures is lower than in previous reports. This is due to the fact that the reliability of figures of different activity levels is very diverse. Especially figures of the inactive and less active vessels are less representative than the figures of the active vessels. To calculate and show fleet results, the representativeness of the figures for some fleets has decreased significantly by mixing data of active, inactive and less active vessels. These problems are especially evident in the following fleets: demersal trawl 12-24m, passive gear <12m, polyvalent gear 12-24m and beam trawl 12-24m.

### Composition by fleet

Beam trawlers above 40 meters depend on catches of (flat) fish, which species usually are highly priced. The share in total value of landings was about 36%. Most of the people employed in fisheries work in the fleet beam trawlers over 40 meters, about 525 people (28%) in 2006. Gross value added was second highest of all fleets. The vessels of this fleet also accounted for 39% of total capacity.

The pelagic trawl fleet over 40 meters landed by far the highest volume of fish (76% of total volume of landings) compared to all other fleets. Gross value added of this fleet was also the highest (56 mln euro). The pelagic fleet is rather small but most of the vessels have a high capacity. The value of landings of the pelagic trawl fleet is the second highest. Price levels of pelagic (frozen) fish are traditional much lower than those of most demersal (fresh) fish.

The beam trawl fleet (including shrimp fisheries) with vessels of 12-24 meters is the third most important fleet. The fleet counted 188 vessels in 2006 and employment on board is second high with around 502 FTE. Total value of landings in this fleet was 47.3 mln Euro in 2006, the third highest value of the fleet. Gross value added reached 25.9 mln Euro, more than 50% of the value of landings.

The fleet beam trawl 24-40 meters is the fourth most important fleet. The vessels heavily depend on the catch of flatfish. Employment was 210 FTE and value of landings reached 36.1 mln Euro.

The demersal trawls fleet, especially 24-40 meters, looks like a promising fleet for the future. Especially since fuel costs in this fleet are significantly lower than in the beam trawl fleet. Gross value added in this fleet is also rather high compared to other fleets. Several beam trawl vessels are currently rebuilding and changing traditional flatfish gear to demersal trawl gear (twin rig and fly shoot). In 2007 and 2008, this fleet will expand at the cost of beam trawl fleets.

All other fleets are of minor economic importance. The fleet passive gears <12m accounted for 206 vessels, but most of the vessels were inactive or less active and total value of landings is estimated at only 3 mln euro.

#### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
Beam trawl >40m	39.1	139.2	84	138.0	525	40.6
Pelagic trawl>40 m	395.1	132.6	15	85.6	465	56.0
Beam trawl 12-24m	18.2	47.3	188	36.6	502	25.9
Beam trawl 24-40m	10.2	36.1	42	37.9	210	15.5
Demersal trawls 24-40m	3.9	8.1	13	6.5	59	5.1
Demersal trawls 12-24m	2.9	9.8	19	3.9	36	1.9
Passive gear <12m*	0.4	2.9	192	12.7	71	*
Polyvalent gear 12-24m	0.1	0.2	15	1.6	25	0.2

Note: \* Including most of the inactive and less active vessels. Gross value added could not be estimated due to lack of information about labour costs.

### Trends and outlook

Because of further decreasing flatfish quota in Europe, in the end of 2007 the Dutch government decided to introduce a new decommissioning scheme for the Dutch cutter fleet. This scheme became effective in the beginning of 2008 and as a result of this the Dutch fishing fleet (just like in 2006) decreased substantially. Another 24 (almost all) big flatfish vessels were scrapped from the fishing register in the month of February 2008. Following this, the total capacity of the cutter fleet was reduced with around 37,000 kW.

The Dutch fishing fleet is consuming traditionally rather large quantities of fuel. Especially the big beam trawl vessels with an average engine of 2,000 hp. Prices of fuel therefore are crucial for the economic performance of the fleet. Since the year 2006 fuel prices are rising and have been doubled by now. By this, in 2008 operating costs raised substantially.

Prices of fish in 2008 are generally slightly decreasing. On average prices for sole and plaice are at a lower level now than in 2007.

Income for crew is decreasing slowly but steady mainly because of the high fuel prices. The sector is now facing a crew problem because crewmen are looking for other jobs.

In general, beam trawlers are not flexible to switch to fisheries with lower fuel consumption. Both beam trawl fleets (over 40 meters and 24-40 meters) are suffering losses weekly now, mainly because of the very high fuel costs. The pelagic fleet is operating at a zero-level and is trying to optimise operations.

The other (lower fuel consuming) fleets like shrimp vessels and Euro cutters generally perform well or operate break even.

#### **Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
Pelagic trawls >40 m	4.68	10.8	11.8	14.23	12.7	10.7
Beam trawl 12-24 m	8.1	4.0	5.5	1.7	-4.4	-2.8
Beam trawl 24-40 m	20.4	15.0	12.6	10.3	15.2	15.3
Beam trawl >40 m	24.1	21.1	15.6	16.1	22.1	23.4
Demersal trawl 24-40 m	2.5	-10.0	11.5	9.4	2.3	0.3
Demersal trawl 12-24 m	-40.4	-3.8	-43.5	-47.7	-5.9	-1.1
Passive gear <12 m	-5.5	-14.1	-2.3	*	*	*
Polyvalent gear 12-24 m	-62.5	**	-119.3	*	*	*

Note: \* Gross value added cannot be determined due to missing data about employment cost in either 2005 or 2006

\*\* No data of landings available in 2005 because vessels are not obliged to fill in logbook

#### *6.14.2. Fleets of special interest*

The three most important fleets, in terms of revenues, are beam trawl (flatfish cutters) over 40 meters, pelagic trawl over 40 meters and beam trawl (including shrimp fisheries) 12-24 meters. These three fleets account for 92% of total value of landings and 86% of total volume of landings.

#### *Beam trawl >40m*

Average income in this fleet (flatfish fishery on species like sole and plaice) has increased since 2004 mostly because the vessels have increased their effort as can be seen by the increase in effort days. However, since the costs also increased, the vessels are making a loss on average. The costs increase mostly caused by an increase in fuel prices. Especially in 2005 and 2006 the average loss per vessel is quite considerable.

	2003	2004	2005	2006
<i>Costs and earnings</i>				
INCOME (1000EUR)	1,316.0	1,212.0	1,259.3	1,563.2
CASHFLOW (1000EUR)	575.0	484.7	388.1	483.5
PROFIT (1000EUR)	14.0	3.0	-73.7	-66.7
VALUE ADDED (1000EUR)	227.0	182.2	134.1	163.7
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	6.4	6.1	6.1	6.3
CAPITAL VALUE (1000EUR)	1,111.0	1,045.9	968.3	1,041.3
EFFORT DAYS	185.1	168.3	181.2	194.5
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	44.1	40.7	38.4	39.1
FLEET (number)	100.0	102.0	100.0	84.0
FLEET GT (1000)	46.8	47.5	46.6	40.0
FLEET KW (1000)	171.8	173.1	167.7	138.0

#### *Pelagic trawls >40m*

The average income in the fleet pelagic trawls over 40 metres has been fairly stable in the period 2003-2006. The profit is slightly above 0 in 2006 for the first time in 4 years. This can be attributed mostly to the decrease in capital costs. The fleet is getting older and investments are low, thus depreciation costs declined and net profit increased.

	2003	2004	2005	2006
<i>Costs and earnings</i>				
INCOME (1000EUR)	8,431.8	7,690.6	8,537.5	8,341.3
CASHFLOW (1000EUR)	1,697.1	933.5	1,522.5	1,559.3
PROFIT (1000EUR)	-16.5	-624.7	-3.8	428.0
VALUE ADDED (1000EUR)	2,973.5	3,741.3	3,734.7	2,973.5
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	36.1	36.1	35.0	31.0
CAPITAL VALUE (1000EUR)	9,312.4	8,389.4	7,837.5	7,578.0
EFFORT DAYS	273.5	274.1	263.1	230.0

<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	432.7	442.5	470.6	395.1
FLEET (number)	17.0	17.0	16.0	15.0
FLEET GT (1000)	90.4	90.4	86.5	79.2
FLEET KW (1000)	99.0	99.0	94.6	84.4

### *Beam trawl 12-24m*

Average income of vessels in this fleet has increased considerably since 2004 but this had no effect on the negative net profit. Vessels have increased their effort as can be seen by the increase in effort days. The costs increased (mostly by higher fuel prices) and the vessels are still making a loss on average. Vessels in this beam trawl fleet mainly catch shrimp and some of them flatfish.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)	270.4	267.9	288.8	312.1
CASHFLOW (1000EUR)	132.0	123.8	137.6	138.7
PROFIT (1000EUR)	-18.7	-23.8	-18.8	-19.5
VALUE ADDED (1000EUR)	36.0	29.6	34.4	32.9
<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE)	2.6	2.6	2.5	2.7
CAPITAL VALUE (1000EUR)	54.7	53.4	53.1	52.5
EFFORT DAYS	112.0	113.2	111.1	114.4
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	18.3	18.4	18.4	18.2
FLEET (number)	203.0	200.0	197.0	187.0
FLEET GT (1000)	12.5	12.5	11.8	11.7
FLEET KW (1000)	40.0	38.7	37.4	36.5

## **6.15. Poland**

### *6.15.1. National fleet*

Polish sea fishing is comprised of two main fleets: Baltic fisheries (involving the vast majority of the fleet) and deep-sea fisheries. No vessels participate in both fisheries. This report only analyzes the Baltic fleet.

Since Poland's accession to the EU, the Polish Baltic fishing fleet has been reduced considerably with regard to both the number and tonnage of fishing vessels. This was primarily due to the implementation of the capacity reduction program. Between 2005 and 2007, 404 fishing vessels engaged in Baltic Sea fishing with a combined tonnage of 15 800 GT and a power of 53 400 kW were withdrawn with the use of state aid. The largest relative scale of reduction concerned demersal trawlers 24-20m in length (VL2440 DTS). This fleet decreased by 43 vessels of a tonnage of 4 400 GT, or approximately 58%. The relative reduction of the fleet was slightly smaller with regard to bottom trawlers 12-24m in length (VL1224 DTS) which were reduced by 35%, i.e., by 49 vessels of a tonnage of 2 100 GT. Fleet reduction is the main reason why employment, capital value effort, and other capacity indicators have decreased. On the other hand, higher prices in 2006 offset the



negative consequences of fleet reduction and led to improved profitability. The value of Baltic catch landings in 2006 was 164 mln PLN (42 mln EUR) and was 5% (9% in Euro) higher than the value of catches in 2005. The Gross Value Added (GVA) of Baltic fisheries was 74 mln PLN (19 mln EUR) and was 40% higher than in the previous year.

The basic fish species caught by Polish fishers in the Baltic Sea are cod, salmon, herring, sprat, flounder, and trout. In 2006, these species constituted more than 90% of the total Polish catch on the Baltic Sea. In 2006, cod remained the most important species economically. According to official data, cod contributed 44% of the total value and 15% of the volume of Polish Baltic landings. Due to the significant level of unreported landings, the real cod dependency might be much higher. In addition to cod, two other species, sprat and herring, are of interest to fishers; however, because of the unfavourable market situation (competition of imported fish) and the insufficient capacity of the pelagic fleet, the catch limits for these species in the Baltic Sea are not fully exploited. In the case of herring, only 59% of the catch quota was used, whereas, in the case of sprat 46% of the available catch limit was caught.

There are three fleets of special interest identified both in terms of landing value as well as vessel number and fishers employed. The first one is pelagic trawlers 24-40m consisting of 41 vessels, 6 300 GT (38% of the total Baltic fleet capacity), the second is small-scale fisheries by passive gear vessels below 12 meters consisting of 622 vessels, 3 000 GT (13%), and the third is gillnet and drift netters consisting of 103 vessels 12-24m, 3 400 GT (15%). However, the remaining two fleets (demersal trawlers 12-24 and 24-40 m) are important as well, in relation to the value of fish landed.

**Basic data total national fleet (Baltic fleet)**

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)		39.7	38.87	42.19
VALUE ADDED (mln EUR)		14.49	13.45	19.19
CASHFLOW (mln EUR)		5.91	4.84	10.56
PROFIT (mln EUR)		0.68	-2.36	6.92
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)		3 795	3 079	2 715
CAPITAL VALUE (mln EUR)		174.,24	154.02	114.05
EFFORT DAYS (1000)		140.58	110.42	91.17
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)		153.89	124.34	104.88
FLEET (number)*		1 240	1 086	919
FLEET GT (1000)*		46.09	37.67	32.67
FLEET KW (1000)*		148.05	123.87	102.79
<i>Average characteristics of vessels*</i>				
GT		37.17	34.69	35.54
KW		119.4	114.06	111.82
AGE		26.26	26.35	26.43

Note: \* includes deep-sea fleets that are not shown in economic indicators.

## Production and prices

Significant increases in fish prices for the most important species were observed in 2004-2006. This might be partly explained by the effect of Poland's accession to the EU. It should be noted that increased prices calculated in national currency (PLN) were much lower. The most spectacular price increase was observed for salmonidae species (sea trout and Atlantic salmon) which was mainly the result of increasing prices of imported Norwegian salmon to the Polish market. Prices for cod increased by 23% in 2004-2006; however, if expressed in national currency the increase was only 5%. One of the consequences of the decommissioning program was the decrease in landings of some species, mainly sprat (-42%) and herring (-27%). Surprisingly, cod landings remained at the same level in 2004 and 2006, however higher prices led to increased landing value.

### **Landings weight, value and average prices, national fleet (Baltic fleet)**

	Weight (1000t)			Value (mln EUR)			Price (EUR/kg)		
	2004	2005	2006	2004	2005	2006	2004	2005	2006
Atlantic cod	15.12	12.78	15.09	15.21	15.36	18.67	1.01	1.2	1.24
European sprat	96.66	74.38	55.95	10.37	7.79	7.52	0.11	0.1	0.13
Atlantic herring	28.41	21.82	20.65	5.74	5.49	6.18	0.2	0.25	0.3
European flounder	8.8	11.15	9.43	3.12	4.31	3.68	0.35	0.39	0.39
Sea trout	0.81	0.57	0.51	1.61	1.39	2.04	1.99	2.44	3.98
European perch	0.74	0.65	0.7	1	1.09	1.26	1.35	1.67	1.79
Pike-perch	0.28	0.23	0.19	0.84	0.8	0.8	2.97	3.44	4.2
Atlantic salmon	0.08	0.11	0.11	0.17	0.28	0.49	2.03	2.52	4.55
European eel	0.08	0.08	0.05	0.42	0.61	0.46	5.05	7.98	8.67
Turbot	0.04	0.08	0.1	0.09	0.21	0.3	2.16	2.78	3.02
Other species	2.87	2.49	2.1	1.04	0.85	0.78	0.36	0.34	0.37

## Composition by fleet

Pelagic trawlers 24-40m is the most important fleet in terms of capacity and fish landed in Polish fisheries. The volume of landings of these vessels in 2006 was 65 thousand tons, which is 62% total Baltic fleet landings. As a consequence of specializing in low value, small pelagic catches, the landing value of these vessels constituted only 33% of the total Baltic fleet. The small scale fisheries fleet (passive vessels less than 12m) accounted for 26% of the total value and 12% of the landing volume. These vessels catch other, mostly high-value, fish species including freshwater fish (roach, freshwater bream, and European perch). But cod remain the most important species followed by flatfish and herring. The fleet has the highest GVA, about 40% of the total Baltic fisheries, however GVA per employee in this fleet remain lower than the total average. Passive gear <12m is the most important group of vessels from the social point of view. Almost 50% of Baltic fishers are employed in this fleet. The rest of the vessels primarily target cod, i.e. demersal trawlers 12-24m, 24-40m and passive gear vessels 12-24m. Their share in the total value of Baltic landings is 13-15%.

**Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
Drift and fixed nets 12-24m	4.11	5.98	103	12.76	442	3.38
Demersal trawl and seine 12-24m	7.03	6.14	91	17.96	360	2.18
Demersal trawl and seine 24-40m	15.2	5.41	44	15.54	267	0.58
Passive gears <12m	13.06	10.85	622	25.67	1 296	7.63
Pelagic trawl and seine 24-40m	65.48	13.81	41	17.54	351	5.42
Total*	104.88	42.19	901	89.47	2716	19.19

Note: \* active vessels

**Trends and outlook**

The economic situation has improved for all fleets. This can be explained by the capacity reduction program that provided the opportunity for vessel owners that found their economic results unprofitable to leave the fisheries. On the other hand, fewer vessels in the fisheries have led to higher individual quotas for species subject to TAC.

After a significant decrease in the GVA indicator in 2005, the pelagic trawler fleet noted a considerable (over twofold) increase in value added in 2006. This resulted from the higher cod quotas received by these vessels in 2006 and the increase of prices of pelagic fish, especially sprat intended for fish meal.

Within the last few years, the 24-40m vessels received higher cod fishing quotas, which encouraged them to abandon the pelagic fleet (pelagic trawlers 24-40m) and conduct directed cod fishing. This is clearly expressed by the economic indicators for 2005 and 2006, especially by the significant increase in landings per vessel.

Higher cod TAC in 2006 (+20%) and individual quotas contributed to higher incomes in the demersal fleets. Much higher prices for Atlantic salmon, sea trout, and cod as well as some freshwater fish meant that revenues for passive gear vessels improved in 2006 as compared to 2005. Increasing fuel costs meant that some vessel owners decided to reduce the number of people in the crew (by one or two), which resulted in higher salaries for those who remained on board. Many precautionary measures to cut losses were implemented. In order to lower fuel costs, the lengths of fishing trips were shortened, and fishers started working closer fishing grounds.

**Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
Drift and fixed nets 12-24m	25.21	16.55	9.3	32.23	34.96	6.33
Demersal trawl and seine 12-24m	34.94	12.76	10.08	33.12	51.83	39.52
Demersal trawl and seine 24-40m	43.49	67.82	17.44	153.96	213.83	-7.89
Passive gears <12m	27.26	15	43.26	46.37	24.79	20.1
Pelagic trawl and seine 24-40m	63.99	19.05	37	200.02	216.47	26.3

In consequence of the apparent exhaustion of the Polish cod quota, the European Commission decided to close the Baltic cod fisheries for Poland in July 2007 (Commission Regulation No 804/2007). This was motivated by the inconsistency between official catch reports and inspections carried out by EU inspectors which revealed that actual landings were three times higher than those reported. As a consequence, the cod quota allocated to Poland from 2008 to 2011 will be reduced over a period of four years by 10% in 2008 and 30% in 2009-2011 (each year) of the amount overfished in 2007 (8 000 tons). This decision will affected almost all vessels and will have negative consequence for profits and crew shares in all fleets.

An additional negative consequence (at least in the short term) may result from the multiannual plan for cod stocks in the Baltic Sea. Aggravated cod protection measures (which will also affect flatfish fisheries) will affect primarily small cod boats (8-12 meters) and may lead to the worsening of their economic situation.

Further capacity reduction directed at cod is anticipated. The reduction of the 12-24m fleet (trawlers and gill netters) as the one directed at cod fishing is anticipated to the greatest extent. The planned fleet reduction is about 20%. Vessels above 24m will also be subject to permanent withdrawal, provided that some of them will be scrapped and others will be transferred to pelagic fisheries. The present size of the pelagic fleet is insufficient to make full use of the fish catch quota available. Severe limitations in the cod fishing quota for the 24-40m fleet vessels are expected. The quota reduction for this fleet was initiated in 2008, when the cod quota for vessels above 24.99m was reduced by 43% and for vessels above 27m by even 84%.

#### 6.15.2. *Fleets of special interest*

##### *Pelagic trawl and seine 24-40m*

The pelagic fleet is the most important in terms of the volume of landings and capacity. In 2006 catches were 65 thousand tons, which comprised over 60% of the total Baltic fleet landings. The fleet consists of 41 trawlers, powered by 430 kW engine, capacity of 155 GT and has a crew of about eight. The average vessel in the fleet is 25 years old. The vessels are primarily directed at pelagic species (sprat and herring). The volume of sprat catches has been characterized by a downward trend in recent years. In 2004, 97 000 tons of sprat was caught. In the following year, sprat catches fell by as much as 23%, and in 2006 by 42% as compared to 2004. About half of the sprat catches is used for manufacturing fishmeal and is landed in Danish ports. The reduction in sprat catches was mainly due to the decrease in the number of vessels engaged in this fishery. In 2004-2006 large pelagic trawlers (24-40 m) had almost an 80% share in landed herring from Polish catches. The economic situation of pelagic trawlers has improved compared to the results of 2005. The average per vessel revenue was as much as 65% higher than the year before. This might be explained by better sprat prices that followed increasing fish meal prices. It must also be noted that 50% of the vessels were either scrapped in 2004-2006 or moved to the demersal trawler fleet. Most likely only those vessels with sound economic performance will remain in the fisheries, which might also explain their better economic results in 2006.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)		204.0	204.2	336.8
CASHFLOW (1000EUR)		18.1	-14.2	59.0
PROFIT (1000EUR)		2.1	-42.7	38.3
VALUE ADDED (1000EUR)		65.6	36.5	132.2

<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE)		6.9	7.5	8.6
INVESTMENT (1000EUR)		534.3	588.9	572.0
EFFORT DAYS		139.8	137.6	165.6
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)		114.86	88	65.48
FLEET (number)		80	66	41
FLEET GT (1000)		11.72	10.28	6.36
FLEET KW (1000)		33.07	28.65	17.54

### *Passive gear <12m*

Passive gear <12m is the most important group of vessels from the employment point of view since almost 50% of Baltic fishers are employed in this fleet. In 2006 the fleet consisted of 622 vessels, powered by 40 kW, capacity of 4.8 GT and crews of one or two. The average vessel in the fleet is 22 years old. As a consequence of the decommissioning program, the number of vessels decreased in 2004-2006 by 18% (135 vessels). This fleet consists of small vessels (average length 8 meters) that catch various marine and freshwater species. The vessels are primarily directed at cod and flatfish in the Baltic Sea. In 2006 cod accounted for 32% of the landed volume and almost 50% of the catch value. Flatfishes were the second most targeted species with a 26% and 12% share, respectively, of the volume and value of fish landed. Passive gear vessels below 12m fish in the Baltic Sea coastal waters (up to 12 NM from the coastline) and the Vistula and Szczecin lagoons. The economic condition of the fleet has improved compared to 2005 which might be explained by higher cod landings as well as better prices. Since the vessels are equipped with rather small, new engines, the increase in fuel prices did not affect them very much.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)		12.6	13.7	17.4
CASHFLOW (1000EUR)		6.8	6.6	8.7
PROFIT (1000EUR)		5.4	4.7	7.3
VALUE ADDED (1000EUR)		8.4	9.4	12.3
<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE)		2.0	2.0	2.1
INVESTMENT (1000EUR)		46.0	47.4	47.4
EFFORT DAYS		109.4	103.2	91.6
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)		14.72	12.51	13.06
FLEET (number)		757	685	622
FLEET GT (1000)		3.53	3.2	2.97
FLEET KW (1000)		30.66	27.74	25.67

### *Drift and fixed nets 12-24m*

In 2004, this fleet consisted of 103 vessels, powered by 120 kW engine, a capacity of 32 GT, and a crew of four. The average vessel in the fleet is 39 years old. The vessels are primarily directed at cod which accounts for 75% of the volume and 65% of the landings. Salmon and sea trout are also important in terms of the value of the species landed, accounting for 30% of the revenues in 2006. In 2006, the economic situation of this fleet was much better than in the year before. This was primarily the effect of increasing salmon and sea trout prices that meant that the salmon and sea trout landing value was 77% higher in 2006 compared to 2005 with no significant change in the volume of fish landed. The vessels also benefited from higher cod prices and higher individual quotas in 2006 which were 30% higher than in 2005.

	2003	2004	2005	2006*
<i>Costs and earnings per vessel</i>				
INCOME (1000EUR)		33.6	46.3	56.4
CASHFLOW (1000EUR)		1.8	9.9	18.3
PROFIT (1000EUR)		-3.9	0.0	12.9
VALUE ADDED (1000EUR)		11.8	21.6	31.9
<i>Other economic indicators per vessel</i>				
EMPLOYMENT (FTE)		4.6	3.8	4.2
INVESTMENT (1000EUR)		190.5	230.6	173.9
EFFORT DAYS		110.9	83.2	92.7
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)		4.23	3.63	4.11
FLEET (number)		119	106	103
FLEET GT (1000)		4.33	4.22	3.37
FLEET KW (1000)		15.7	14.83	12.76

Note: \* in 2006 included are longliners (12-24m), which, in previous years, were shown separately.

## 6.16. Portugal

### 6.16.1. Portugal mainland

The Portuguese territory is composed of the mainland area, the archipelago of Azores and the archipelago of Madeira. Due to the specifications of the ultra periferic regions, the data was collect and analyzed separately. Thus in this chapter only the Mainland fleet will be covered.

The Portuguese mainland production (fresh and refrigerated fish) has been decreasing along the years and amounted to 164 mln euro, in 2006.

The major part of the landings value for fresh and refrigerated fish, 67%, involved the polyvalent fleet (PGP <12m), whose target species are demersal species, bottom trawl fleet (DTS 24-40m, DTS 24-40m), whose target species are pelagic species and the purse seiner (PTS 12-24m, PTS 24-40m).

For the bottom trawl fleet greater than 40 meters, it was not possible to obtain results on economic parameters. However, this fleet is important due to the fact that the weight of landings for this fleet is mounting to 29 thousand tonnes, which represents almost 18% of the total of landings.

The Mainland fleet operate primarily in the Portuguese Coast (CIEM IX), in the Atlantic North (NEAFC), NAFO, CECAF and in the south Atlantic..

The Portuguese coast is a multi specific area with a large diversity of species. However, the most important species are sardine, mackerel, octopus and hake which weight represents 43% of total landings.

Regarding the economic parameters, it must be pointed out that the collection of data was planned for all fleets. However, it was not possible to get results for some fleets (dredges 12-24m, pelagic trawlers and seiners 24-40m; demersal trawlers and seiners >40m and passive polyvalent gears 24-40m). Thus, the results presented in this document exclude 75 vessels (some of them with big influence on fleet).

In 2006, the covered fleet generated income of 338 mln Euro. The fuel costs were obtained with the implementation of a sample process as well as the others economics parameters. However, some crosschecking was made with administrative data (on volume consumption of diesel with benefits). This crosschecking demonstrated that the quality of data for fuel consumption and costs were not satisfactory. Thus there is no utility in publish such data.

**Basic data total national fleet**

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR) <sup>(1)</sup>	188.16	179.71	176.03	164.23
VALUE ADDED (mln EUR)	NA			
CASHFLOW (mln EUR)	NA			
PROFIT (mln EUR)	NA			
<i>Other economic indicators</i>				
EMPLOYMENT (engaged crew)	16,605	14,862	14,750	14,445
CAPITAL VALUE (mln EUR)	NA			
EFFORT DAYS (1000)	60,66	56,37	75,89	72,17
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	178,36	161,22	164,57	166,12
FLEET (number)*	8156	8040	7905	7551
FLEET GT (1000)*	98,2	98,8	94,3	93,2
FLEET KW (1000)*	333,4	331,5	322,3	318,9

Average characteristics of vessels(active fleet)				
GT	12,01	12,29	11,93	12,34
KW	40,88	41,23	40,77	42,23
AGE	24,1	24,29	24,54	24,6

NA – Not available;

<sup>(1)</sup> Value of landings only for fresh fish;

Note: \* includes 3,666 not licensed vessels with 15.7 GT (1000) and 58.2 kW (1000) for 2003, includes 3,606 not licensed vessels with 19.5 GT (1000) and 5.,4 kW (1000) for 2004, includes 3,336 not licensed vessels with 7.9 GT (1000) and 33.5 kW (1000) for 2005 and includes 3,666 not licensed vessels with 15.7 GT (1000) and 58.2 kW (1000) for 2006.

### Production and prices

The sardine is the most important species for the Mainland fishing activity and represents 29% of total volume of landings. However, the volume and value of landings have been decreasing along the years.

The second and third most important species; the Atlantic horse mackerel and the Octopus are increasing in terms of landings.

### **Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
European pilchard(=Sardine)	65.99	57.09	50.57	48.07	37.86	34	32.12	25.58	0.57	0.6	0.64	0.53
Atlantic horse mackerel	13.3	13.5	13.89	15.13	16.49	18.6	17.75	14.68	1.24	1.38	1.28	0.97
Common octopus	1.33	0.59	3.24	3.79	4.53	1.96	9.14	11.57	3.41	3.35	2.82	3.05
Octopuses; etc. nei	8.49	7.51	7.44	3.33	29.47	24.91	19.41	9.04	3.47	3.32	2.61	2.72
European hake	2.51	2.16	1.92	2.32	7.06	7.07	6.85	6.98	2.81	3.27	3.57	3.01
Norway lobster	0.38	0.39	0.34	0.32	4.52	4.75	5.37	5.85	11.92	12.16	15.91	18.42
Black scabbard fish	2.63	2.46	2.74	2.68	5.24	5.07	5.44	5.68	1.99	2.06	1.98	2.11
Common cuttlefish	1.31	1.64	1.75	1.77	3.89	4.24	4.65	4.8	2.98	2.58	2.67	2.71
Deep-water rose shrimp	1.32	0.16	0.19	0.4	9.19	3.49	2.55	4.63	6.96	22.19	13.42	11.55
Common sole	0.13	0.16	0.24	0.3	1.1	1.49	2.77	4	8.57	9.21	11.31	13.27
Other species	81	75.56	82.26	88.01	68.81	74.13	69.99	71.41	0.85	0.98	0.85	0.81

### Composition by fleet

The licensed fleet is composed by 4,312 vessels (57% of the total active fleet).

The mainland small scale fishery fleet (<12m) have always had a strong social influence on small coastal. This fleet provides for about 8,400 fishermen (58% of total employment on fisheries) as well as their families.

Most small scale vessels are licensed for the usage of multi gears. In general for passive gears, PGP <12m, this special fleet represents 56.5% of the total number of vessels from the licensed fleet (2,437 vessels) and has the best performance regarding value of landings for fresh and refrigerated fish.

The purse seiner fleet and the demersal trawl fleet have the larger influence on volume of landings. Together those fleets represent 50% of the total volume of landings and the main fleets are demersal



trawlers and seiners 24-40m, demersal trawlers and seiners above 40m, pelagic trawlers and seiners 12-24m and pelagic trawlers and seiners 24-40m.

#### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
Drift and fixed net <12m	0.76	2.73	314	6.23	555	
Drift and fixed net 12-24m	2.40	7.7	58	8.75	823	
Dredges <12m	1.55	1.88	70	4.16	218	
Dredges 12-24m	0.81	1.29	18	1.62	NA	
Demersal trawl and seine 12-24m	1.49	5.62	23	5.25	848	
Demersal trawl and seine 24-40m		29.86	83	45.62	892	
Demersal trawl and seine >40m	29.09	NA	13	27.68	NA	
Pots and traps <12m	1.01	2.75	68	2.49	136	
Pots and traps 12-24m	0.90	2.61	23	2.73	338	
Gears using hooks <12m	0.70	2.82	336	6.56	545	
Gears using hooks 12-24m	3.75	7.9	27	5.05	502	
Gears using hooks 24-40m	6.25	2.58	24	10.68	467	
Polyvalent passive gears <12m	14.80	34.89	2437	65.79	6064	
Polyvalent passive gears 12-24m	7.08	20.05	165	26.1	1074	
Polyvalent passive gears 24-40m	6.43	1.64	27	15.38	NA	
Combining mobile and passive gears <12m	4.87	5.55	401	10.37	536	
Combining mobile and passive gears 12-24m	14.97	10.81	61	9.63	859	
Combining mobile and passive gears 24-40m	0.87		6	2.83		
Pelagic trawl and seine <12m	3.45	2.15	75	2.4	317	
Pelagic trawl and seine 12-24m	29.40	14.67	61	15.7	271	
Pelagic trawl and seine 24-40m	13.35	7.1	22	7.29	NA	

#### Trends and outlook

The stratification used to collect economic information for 2006 was very different from 2005 and previous years. In consequence, the data is not comparable for those years. Thus, in order to prevent the wrong interpretation of the results, only 2006 years data will be presented in this report. There is a special effort to review data to repeat stratification for 2003, 2004 and 2005, in order to provide a better quality and comparable data.

However, taking in account the general results for the entire fleet (excluding the fleets stated in the introduction); there was an increase of 4% in the average income per vessel for 2006. In 2006, the average income per vessel was almost 80 thousands Euro.

There was not a significant change in volume of landings between 2005 and 2006.

### 6.16.2. *Fleets of special interest*

The fleets with special interest are the passive gears polyvalent <12m, the pelagic trawlers and seiners 12-24m and the Pelagic Trawlers and Seineurs 12-24m. Like stated above, those fleets have significantly contributed to landings weight and value, for fresh and refrigerated fish. Moreover, the referred fleets are very important in terms of the social aspects of the fishing sector, giving work to 7,409 persons which represent more than 50% of total number of fishermen.

#### *Passive gears Polyvalent <12m*

	2006
<i>Costs and earnings per vessel</i>	
INCOME(1000 EUR)	60.31
CASHFLOW	NA
PROFIT	NA
VALUE ADDED	NA
<i>Other economic indicators per vessel</i>	
EMPLOYMENT (engaged crew)	2
CAPITAL VALUE	NA
EFFORT DAYS	NA
<i>Capacity indicator per vessel</i>	
LANDINGS WEIGHT (Tonnes)	6.1
FLEET (number)	2,437
FLEET GT	1.90
FLEET KW	27.00

#### *Pelagic trawl and seine 12-24m*

	2006
<i>Costs and earnings per vessel</i>	
INCOME(1000 EUR)	556.39
CASHFLOW	NA
PROFIT	NA
VALUE ADDED	NA
<i>Other economic indicators per vessel</i>	
EMPLOYMENT (engaged crew)	4
CAPITAL VALUE	NA
EFFORT DAYS	86

<i>Capacity indicator per vessel</i>	
LANDINGS WEIGHT (Tonnes)	482.0
FLEET (number)	61
FLEET GT	49.51
FLEET KW	257.38

*Demersal trawl and seine 24-40m*

	2006
<i>Costs and earnings per vessel</i>	
INCOME(1000 EUR)	413.98
CASHFLOW	NA
PROFIT	NA
VALUE ADDED	NA
<i>Other economic indicators per vessel</i>	
EMPLOYMENT (engaged crew)	11
CAPITAL VALUE	NA
EFFORT DAYS	206
<i>Capacity indicator per vessel</i>	
LANDINGS WEIGHT (Tonnes)	295
FLEET (number)	83
FLEET GT	209.76
FLEET KW	549.64

### 6.17. Azores

The production of the Portuguese archipelago of the Azores (fresh and refrigerated fish) has been increasing gradually and amounted to 31.83 mln euro, in 2006.

The Azores fleet has only fleets of polyvalent gears (PMP <12m, PMP 12-24m and PMP 24-40m) whose target species are demersal species and large pelagic migrates.

The major part of the Azores fleet operate in Portuguese waters (subarea Azores)

Regarding the economic parameters it must be pointed out that the collection of data was planned for all fleet. However, it has not yet been possible to obtain data from 2006.

**Basic data total national fleet**

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR) <sup>(1)</sup>	25.62	26.86	28.36	31.83
VALUE ADDED (mln EUR)	NA			
CASHFLOW (mln EUR)	NA			
PROFIT (mln EUR)	NA			
<i>Other economic indicators</i>				
EMPLOYMENT (Engaged Crew)	3,160	3,037	2,952	
CAPITAL VALUE (mln EUR)	NA			
EFFORT DAYS (1000)	50.28	45.7	47.06	47.1
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	9.66	10.81	8.95	12.17
FLEET (number)*	1,617	1,582	1,584	735
FLEET GT (1000)*	11.7	10.8	11.0	10.1
FLEET KW (1000)*	48.1	45.9	48.5	46.1
<i>Average characteristics of vessels</i>				
GT	7.24	6.83	6.94	13.74
KW	29.75	29.01	30.62	62.72
AGE	26.71	27.71	27.02	26.15

<sup>(1)</sup> Value of landings only for fresh fish;

Note: \* includes 3,666 not licensed vessels with 15.7 GT (1000) and 58.2 kW (1000) for 2003, includes 3,606 not licensed vessels with 19.5 GT (1000) and 5.4 kW (1000) for 2004, includes 3,336 not licensed vessels with 7.9 GT (1000) and 33.5 kW (1000) for 2005 and includes 3,666 not licensed vessels with 15.7 GT (1000) and 58.2 kW (1000) for 2006.

**Production and prices**

The black spot (red sea bream) is the most important species for the Azores fishing activity and represents 31% of total value of landings. However, in volume of landings the Skipjack tuna is important too, and represents 48% of total volume landings

**Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Blackspot(=red) seabream	1.07	1.07	1.53	0.96	7.16	8.43	11.39	9.99	6.71	7.84	7.45	10.42
Wreckfish	0.27	0.19	0.28	0.50	2.53	2.14	2.89	4.65	9.37	11.32	10.38	9.38
Skipjack tuna	3.10	4.17	2.00	5.91	1.76	2.42	1.27	3.14	0.57	0.58	0.64	0.54
Veined squid	0.54	0.26	0.27	0.47	2.49	1.56	1.39	2.75	4.65	5.99	5.06	5.82
Blue jack mackerel	1.50	1.25	1.23	1.29	2.00	2.02	1.94	2.00	1.33	1.62	1.57	1.54
Blackbelly rosefish	0.34	0.28	0.19	0.21	1.02	0.91	0.68	0.84	3.02	3.24	3.59	4.04
European conger	0.44	0.35	0.30	0.34	0.97	0.81	0.74	0.84	2.20	2.28	2.43	2.44
Unknown	0.23	0.22	0.21	0.16	0.64	0.67	0.80	0.68	2.77	3.00	3.88	4.23
Swordfish	0.06	0.07	0.10	0.10	0.30	0.42	0.69	0.62	5.36	6.14	6.78	6.10

Forkbeard	0.20	0.19	0.13	0.12	0.78	0.75	0.57	0.60	3.91	3.86	4.47	5.06
Other species	1.91	2.75	2.71	2.20	5.97	6.72	6.01	5.72	3.12	2.45	2.21	2.59

### Composition by fleet

The primary part of the Azores fleet consists of small scale fisheries licensed for passive polyvalent gears <12m. This special fleet represents 88.46% of total number of vessels from the licensed fleet.

The largest volume and value of landings were made by the passive polyvalent fleet, representing 38% of total landings in volume and 58% in value.

### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
Combining mobile and passive gears <12m	4.6	18.48	567	20.04	4.6	
Combining mobile and passive gears 12-24m	1.43	6.77	43	5.16	1.43	
Combining mobile and passive gears 24-40m	6.15	6.57	31	14.64	6.15	

### Trends and outlook

There is a special effort needed to obtain data, in order to provide a better quality and comparable data. However, taking into account the general results for the fleet, we can verify some increasing volume and value of landings between 2003 and 2006.

#### *6.17.1. Fleets of special interest*

The fleet with special interest is the passive polyvalent gears <12m since it contains the highest number of vessels. This fleet has significantly contributed to the total landings weight and value for fresh and refrigerated fish.

	2003	2004	2005	2006
<i>Costs and earnings per vessel</i>				
INCOME (mln EUR)	27.3	29.0	34.6	NA
CASHFLOW (mln EUR)				
PROFIT (mln EUR)				
VALUE ADDED (mln EUR)				
<i>Other economic indicators per vessel</i>				
EMPLOYMENT (Engaged Crew)	3.5	3.5	3.5	NA
CAPITAL VALUE (mln EUR)				
EFFORT DAYS	64.7	57.4	65.0	65.1

Capacity indicators (total fleet)				
LANDINGS WEIGHT (t)	7.3	7.4	7.8	8.1
FLEET GT (average)	2.5	2.5	2.6	2.6
FLEET KW (average)	30.3	31.1	33.0	35.3

## 6.18. Madeira

### 6.18.1. National fleet

In 2006 the production of the fleet that operate in the Portuguese waters (subarea of Madeira – CECAF Area)) amounted to 11.08 mln Euro, which are more or less stable in the last years.

The fleet of the subarea of Madeira includes the fleets: passive gears – Hooks <12m, 12-24m and 24-40m, polyvalent gears <12m and 24-40m, and purse seiner fleet 12-24m, who target species demersal species and large pelagic species.

Regarding the economic parameters it must be pointed out that the collection of data was planned for all fleet. However, it was not possible to get results.

#### Basic data total national fleet

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR) <sup>(1)</sup>	11.47	10.61	9.96	11.08
VALUE ADDED (mln EUR)	NA			
CASHFLOW (mln EUR)	NA			
PROFIT (mln EUR)	NA			
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)		755	727	
CAPITAL VALUE (mln EUR)	NA			
EFFORT DAYS (1000)	10.45	9.73	8.8	8.61
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	6.3	6.67	6.02	6.14
FLEET (number)*	489	467	466	468
FLEET GT (1000)*	4.4	3.4	3.4	3.7
FLEET KW (1000)*	17.5	13.6	13.8	15.1
<i>Average characteristics of vessels</i>				
GT	9.00	7.28	7.30	7.91
KW	35.79	29.12	29.61	32.26
AGE	26	26.22	25.36	24.2

<sup>(1)</sup> Value of landings only for fresh fish;

Note: \* includes 3,666 not licensed vessels with 15.7 GT (1000) and 58.2 kW (1000) for 2003, includes 3,606 not licensed vessels with 19.5 GT (1000) and 5.4 kW (1000) for 2004, includes 3,336 not licensed vessels with 7.9 GT (1000) and 33.5 kW (1000) for 2005 and includes 3,666 not licensed vessels with 15.7 GT (1000) and 58.2 kW (1000) for 2006.

#### Production and prices

The Black scabbard fish is the most important species and represents 44% and 59% of the total volume and value of landings, respectively. The second most important species is the Bigeye tuna that represents 14% and 13% of the total volume and value of landings

#### **Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Black scabbard	3.67	3.75	3.19	2.72	6.82	7.06	6.49	6.58	1.86	1.88	2.03	2.42
Bigeye tuna	0.54	0.53	0.23	0.89	1.68	1.11	0.48	1.45	3.12	2.11	2.1	1.63
Skipjack tuna	0.47	0.7	0.92	1.07	0.44	0.58	0.73	0.83	0.94	0.82	0.8	0.78
Blue jack mackerel	0.57	0.65	0.48	0.5	0.8	0.71	0.75	0.63	1.4	1.08	1.56	1.26
Chub mackerel	0.23	0.43	0.57	0.33	0.25	0.23	0.49	0.41	1.11	0.53	0.86	1.26
Limpets nei	0.05	0.06	0.07	0.09	0.22	0.23	0.29	0.37	4.03	4	4.01	4.23
Wreckfish	0.01	0.01	0	0.02	0.16	0.02	0.06	0.16	11.26	3.09	13	9.58
Red porgy	0.02	0.02	0.02	0.02	0.17	0.15	0.16	0.14	7.16	7.55	7.32	6.76
Forkbeard	0.01	0.01	0.01	0.02	0.04	0.04	0.04	0.06	3.93	3.09	3.67	3.04
Combers nei	0.01	0.01	0.01	0.01	0.04	0.05	0.05	0.05	6.85	6.83	8.12	5.69
Other species	0.72	0.51	0.51	0.49	0.85	0.43	0.43	0.39	1.18	0.85	0.84	0.79

#### Composition by fleet

More than 50% of the licensed fleet small scale vessels licensed for passive polyvalent gears <12m.

However, the most important fleet in relation to the volume and value of landings and in terms of employment is the fleet of passive gears using hooks 12-24m.

#### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
HOK <12m	0.91	1.97	23	1.36		
HOK 12-24m	3.1	6.66	26	4.09		
HOK 24-40m	1.07	0.96	4	2.08		
HOK >40m	0.04					
PGP <12m	0.12	0.4	69	1.08		
PGP 24-40m						
PTS 12-24m	0.9	1.08	5	1.06		

#### Trends and outlook

There is a special effort to obtain data, in order to provide a better quality and comparable data. However, taking into account the general results for the fleet we can verify some stability in volume and value of landings between 2003 and 2006.

#### *6.18.2. Fleets of special interest*

The fleet with special interest is the fleet of passive gears - Hooks 12-24m, whose target species are the black scabbard fish. It is the fleet with the highest volume of landings (54.5% of total volume and 66.7% of total value) and the highest number of employment (46.2% in 2005)

	2003	2004	2005	2006
Costs and earnings per vessel				
INCOME (mln EUR)		224.4	250	
CASHFLOW (mln EUR)				
PROFIT (mln EUR)				
VALUE ADDED (mln EUR)				
Other economic indicators per vessel				
EMPLOYMENT (FTE)		12.6	12.9	
CAPITAL VALUE (mln EUR)				
EFFORT DAYS	138.8	127.8	116.5	106.9
Capacity indicators (total fleet)				
LANDINGS WEIGHT (t)	138	134.8	135.8	119.2
FLEET GT (average)	29.6	29.26	27.3	30.3
FLEET KW (average)	160.4	157	149.6	157.3

## 6.19. Slovenia

### 6.19.1. National fleet

In 2006, the Slovenian fisheries sector was still affected by the small size of our sea fishing area. The existence of two sea fishery reserves where all fishing activities are banned (Portorož and Strunjan fishery reserves) limits the Slovenian fishing area. This has a negative impact especially on those fishermen who are engaged only in small-scale coastal fishing.

In 2006 the national value of landings was 3.42 mln Euro. Major fleets are pelagic trawls and seiners 24-40m, demersal trawl and seine 12-24m and pelagic trawl and seine 12-24m, representing 80% of the national value of landings.

Most important species are anchovy and sardines, which account for 34, 8% of the value of landings.

The Slovenian fishing fleet consist predominantly of small vessels of less than 12m, mainly consisting of vessels of 6 meters.

Significant characteristic of Slovenian fleet is age. The average age was calculated at approximately 32.08 years in 2006. Vessels with the highest average age are vessels belonging to the 12 to 18 meters length overall category.



**Basic data total national fleet**

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)				3.42
VALUE ADDED (mln EUR)				
CASHFLOW (mln EUR)				
PROFIT (mln EUR)				
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)				210
CAPITAL VALUE (mln EUR)				
EFFORT DAYS (1000)				4.58
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)				2.08
FLEET (number)				184
FLEET GT (1000)				1.09
FLEET KW (1000)				11.18
<i>Average characteristics of vessels</i>				
GT				5.95
KW				60.76
AGE				32.08

Production and prices

Slovenia started gathering DCR data in 2006.

The most important species are anchovy and sardines, which account for 34.8% of the value of landings and 74.6% of total weight.

**Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
European anchovy				0.97				1.16				1.2
European pilchard (=Sardine)				0.59				0.75				1.27
Musky octopus				0.06				0.33				5.7
Common cuttlefish				0.04				0.24				5.7
Whiting				0.09				0.2				2.35
European sprat				0.09				0.11				1.2
European squid				0.02				0.09				5.7
Mullets nei				0.03				0.07				2.45
Spottail mantis squillid				0.01				0.04				4.46
Gilthead seabream				0.01				0.04				5.2
Other species				0.18				0.39				2.17

Composition by fleet

Three major fleet - pelagic trawl and seine 24-40m, demersal trawl and seine 12-24m and pelagic trawl and seine 12-24m, represent 80% of the national value of landings and just 7.6% of all employees. These three fleets also represent 17% of all active vessels in Slovenia.

The largest fleet regarding the number of vessels and employment are drift and fixed nets <12m. This fleet represents 65% of all active vessels and 30% of all employment. However, this fleet represents only 5% of the national value of landings.

Demersal trawl and seine <12m represent 10% of the national value of landings, 5% of all employees and 10% of all active vessels in Slovenia.

All pelagic trawl and seine together represent 64,6% of the national value of landings, 3,8% of all employees and 9,6% of all active vessels in Slovenia.

All demersal trawl and seiners together represent 29% of the national value of landings, 9,5% of all employees and 16% of all active vessels in Slovenia.

From the data below, it is evident that the Slovenian fishing fleet consist predominantly of small vessels of less than 12 meters (mainly vessels of 6 meters). The number of such vessels is 66 (all active vessels are 83) and they catch only 16% of the national value of landings. However, 14 larger vessels catch 80% of the national value of landings.

#### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
Pelagic trawl and seine 24-40m	1.23	1.52	2	1.2	2	
Demersal trawl and seine 12-24m	0.17	0.65	8	1.36	10	
Pelagic trawl and seine 12-24 m	0.45	0.59	4	0.41	4	
Drift and fixed nets <12m	0.06	0.19	54	1.71	63	
Drift and fixed nets -24m			1	0.54	1	
Demersal trawl and seine <12m	0.09	0.35	8	1.06	10	
Pots and traps <12m		0.01	3	0.03	3	
Gears using hooks <12m			1	0.02	1	
Pelagic trawl and seine 12-24m	0.07	0.1	2	0.11	2	

#### Trends and Outlook

Increasing fuel prices will affect the fishing sector. The fuel prices will affect mostly the three major fleets in Slovenia.

These three fleets are represented by vessels longer than 12 metres, fishing on grounds far from shore, thus implying large fuel consumption. Many vessels already work on the edge of profitability. Increasing prices of the fuel can threaten their existence.

On the other hand the development of fish prices can alleviate high fuel prices.

The future development of the Slovenian fishing fleet is delineated in the Operational Programme for Fisheries Development in the Republic of Slovenia 2007-2013 (OP). The OP foresees the following measures related to the fishing fleet within its priority axes:

Priority axis 1: Adaptation of the fishing fleet (the goal of this axis is to achieve a balance between the capacity of the Slovenian fishing fleet and the available fisheries resources): permanent cessation of fishing activities; measures on board fishing vessels (in order to improve the working conditions and safety of fishermen) and improving the selectivity of fishing gear; measures focused on small-scale coastal fishing.

Priority axis 2: Measures of common interest: collective actions for the improvement of safety and working conditions for the fishermen; measures to improve existing ports and landing sites.

Priority axis 3: Sustainable development of fisheries areas: opportunities for the diversification of fishing activities (e.g. into fishing tourism).

#### *6.19.2. Fleets of special interest*

Three major fleets - pelagic trawl and seine 24-40m, demersal trawl and seine 12-24m and pelagic trawl and seine 12-24m, represent 80% of the national value of landings and just 7.6% of all employees. These three fleets also represent 17% of all active vessels in Slovenia.

##### *Pelagic trawl and seine 24-40m*

Pelagic trawl and seine 24-40m is the largest fleet in terms of value of landings in Slovenia. They represent 44% of the national value of landings. This fleet consists of two vessels with two employees. Pelagic trawl and seine 24-40m fish in the Adriatic Sea and in the Mediterranean area. The most important species are anchovy and sardines.

	2003	2004	2005	2006
Costs and earnings per vessel				
INCOME (mln EUR)				
CASHFLOW (mln EUR)				
PROFIT (mln EUR)				
VALUE ADDED (mln EUR)				
Other economic indicators per vessel				
EMPLOYMENT (FTE)				1
CAPITAL VALUE (mln EUR)				0.76
EFFORT DAYS (1000)				0.17
Capacity indicators (total fleet)				
LANDINGS WEIGHT (1000t)				0.66
FLEET (number)				2
FLEET GT (1000)				0.31
FLEET KW (1000)				1.2

##### *Demersal trawl and seine 12-24m*

Demersal trawl and seine 12-24m is the second largest fleet based on value of landings in Slovenia. It represents 19% of the national value of landings. In this fleet, there are 8 vessels with 10 employees. Demersal trawl and seine 12-24m fish in the Adriatic Sea and in the Mediterranean area.

The most important species are musky octopus (EDT) and common cuttlefish (CTC).

	2003	2004	2005	2006
Costs and earnings per vessel				
INCOME (mln EUR)				
CASHFLOW (mln EUR)				
PROFIT (mln EUR)				
VALUE ADDED (mln EUR)				
Other economic indicators per vessel				
EMPLOYMENT (FTE)				1.25
CAPITAL VALUE (mln EUR)				0.08
EFFORT DAYS (1000)				0.07
Capacity indicators (total fleet)				
LANDINGS WEIGHT (1000t)				0.02
FLEET (number)				8
FLEET GT (1000)				0.15
FLEET KW (1000)				1.36

#### *Pelagic trawl and seine 12-24 m*

Pelagic trawl and seine 12-24m is the third largest fleet by value of landings in Slovenia. It represents 17% of the national value of landings. In this fleet, there are 4 vessels with 4 employees. Pelagic trawl and seine 12-24m fish in the Adriatic Sea and in the Mediterranean area.

The most important species are anchovy and sardines.

	2003	2004	2005	2006
Costs and earnings per vessel				
INCOME (mln EUR)				
CASHFLOW (mln EUR)				
PROFIT (mln EUR)				
VALUE ADDED (mln EUR)				
Other economic indicators per vessel				
EMPLOYMENT (FTE)				1
CAPITAL VALUE (mln EUR)				0.15
EFFORT DAYS (1000)				0.1

Capacity indicators (total fleet)				
LANDINGS WEIGHT (1000t)				0.11
FLEET (number)				4
FLEET GT (1000)				0.04
FLEET KW (1000)				0.41

## 6.20. Spain

### 6.20.1. National fleet

Spain has one of the largest fleets in the EU and in terms of landings (value and weight) it is still one of the most important member states. Despite that the fleet size has decreased in the last years given the existing strong overcapitalization and steadily reduced fishing possibilities.

The Spanish fleets can be divided in those fishing in the North East Atlantic, Mediterranean, NAFO, and Pacific and Indic Oceans. The most industrialized fleets are purse seiners above 40m in length that fish tropical tunas all around the world (especially in the Pacific and Indic oceans) and the so called “300 fleet” that targets Northern Hake in a mixed fishery contest in the North east Atlantic. The remaining fleets (covering almost all gears) in the Atlantic, Mediterranean and NAFO fishing areas.

Roughly speaking, 80% of the vessels of the Spanish fleet are classified within the fleet of the artisanal fleet, below 12 meters. The Spanish fleet shows a large diversification with respect to fishing gears, species and fishing grounds, and an enormous sphere of activities, that reaches almost all the important fishing-grounds of the world, in such a way that a large part of landed fishing comes from distant fishing-grounds.

The fleets selected are the trawlers from 24-40m which are affected by the recovery plan of the northern hake and by the fuel prices increase (given that they are a mobile gear), the purse seiners of the same size which are affected by the closure of the anchovy fishery in the Bay of Biscay, and the large purse seiners which is one of the most profitable fishery in Spain.

Unfortunately there is no data available for economic variables for years 2005 and 2006, which implies that the recent changes in terms of fuel prices increments cannot be analyzed. Given a general stability in the quotas available for the period 2005 -2006 for the fishing fleet, the Spanish national fleet economic performance is expected to be deteriorated in this last period, especially due to fuel price rise. This economic deterioration is expected to be greater in the active gears than in the passive ones. The overcapacity problem must be exacerbated in this period for the Spanish national fleet.

Fish prices are expected to remain stable in real terms. It implies that given the rise of fuel costs trawlers operating in High Seas, mainly NAFO fleets as well as trawlers in Celtic Sea and Iberian Peninsula must be the fleets which have reduced the profitability in this period.

Focusing on the fish markets of North-western Spain, we can observe that fish prices, in real terms, have not been incremented significantly from 2005 to 2008. Some important species such as hake and albacore have not shown a good price evolution from 2005 to 2008.

It is also important to mention the closure in 2006 of the Bay of Biscay anchovy fishery, which will affect small and medium sized purse seiners.

#### Basic data total national fleet

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	623.98	685.9		
VALUE ADDED (mln EUR)	54.7	35.99		
CASHFLOW (mln EUR)				
PROFIT (mln EUR)				
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	44,712	44,212		
CAPITAL VALUE (mln EUR)	3,057	41,813		
EFFORT DAYS (1000)	166.21	176.59		
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	170.25	189.11	212.81	203.18
FLEET (number)*	14,543	14,178	13,832	13,504
FLEET GT (1000)*	476.96	494.47	489.9	490.78
FLEET KW (1000)*	1,174.82	1,175.66	1,140.93	1,122.57
<i>Average characteristics of vessels</i>				
GT	32.8	34.88	35.42	36.34
KW	80.78	82.92	82.49	83.13

#### Production and prices

No data available for Spain.

#### Composition by fleet

The most important fleet in terms of number of vessels is the one using mobile gears from 0 to 12m. This fleet accounts for the 65% of the Spanish total fleet, but given that it is an artisanal fleet the volume of landings is low (even if the prices obtained are relatively high). In this fleet we find vessels from the Mediterranean and the Atlantic.

Another important fleet is the demersal trawlers and seiners from 24 to 40 meters. They account for the 40% of the total landings made by the Spanish fleets, and again we can think on trawlers fishing all over the Atlantic Ocean. This fleet is to be affected in a strong way by the fuel costs increments given their mobile fishing gear condition.

**Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
Demersal trawl and seine <12m	0		38	1.69		
Demersal trawl and seine 12-24m	2.47		966	162.84		
Demersal trawl and seine 24-40m	82.28		534	209.89		
Demersal trawl and seine >40m	27.36		86	96.99		
Gears using hooks <12m	0.13		1119	21.4		
Gears using hooks 12-24m	6.45		282	36.4		
Gears using hooks 24-40m	27.63		256	97.01		
Gears using hooks >40m	0.59		31	24.48		
Mobile gears others <12m	0.82		8674	143.18		
Mobile gears others 12-24m	5.92		686	57.25		
Mobile gears others 24-40m	0.59		13	3.61		
Pelagic trawl and seine <12m	0.84		84	4.85		
Pelagic trawl and seine 12-24m	19.73		546	90.99		
Pelagic trawl and seine 24-40m	28.12		154	58.15		
Pelagic trawl and seine >40m	0.24		35	113.82		

Trends and outlook

In spite of a general stability in the quotas available in period 2006-2008 for the fishing fleet, the Spanish national fleet economic performance has deteriorated strongly from 2006 to 2008, due to fuel price rise. This economic deterioration is greater in the trawler fleets than in the passive fishing gears. The overcapacity problem must be exacerbated in this period for the Spanish national fleet.

Fish prices remained stables in real terms and is expected to be like that for 2007 and 2008. The trawlers operating in High Seas, mainly NAFO fleet as well as trawlers in Celtic Sea and Iberian Peninsula will probably be the fleets with the worst economic performance in 2008. In the sphere of passive gears, the purse seiners targeting anchovy is expected to have lower economic performance due to the anchovy closure in 2006, 2007 and 2008.

*6.20.2. Fleets of special interest**Pelagic trawl and seine 24-40m*

This fleet accounts for the major part of the purse seiners targeting tunas (albacore) and anchovy in ICES Sub-area VIII (Bay of Biscay), even if there could be the inclusion of some other vessels fishing in the Atlantic and in the Mediterranean. The importance of selecting this fishery comes from the fact that from year 2005 and onwards one of its most important fisheries has been closed (the anchovy fishery of the Bay of Biscay).

Remarkable is the negative cash flows that this fleet is facing, except for in 2004, even if the income has increase for 2005. It is expected to be like that in the remaining years, given that the conditions have not improved. Some fisheries closed (anchovy of the Bay of Biscay) and the rise in the input prices will certainly create a worse situation.

It is also remarkable the steady decrease in the number of vessels 8% from 2003 and 2006, even if the effort in terms of number of days fished has increased.

	2003	2004	2005	2006
<i>Costs and earnings</i>				
INCOME (mln EUR)	60.21	73.98	78.16	
CASHFLOW (mln EUR)	-0.68	9.95	-1.5	
PROFIT (mln EUR)				
VALUE ADDED (mln EUR)	27.91	40.29	40.86	
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	2 060	3 241	2 521	
CAPITAL VALUE (mln EUR)	115.28	103.74	216.18	
EFFORT DAYS (1000)	12.85	14.42	14.14	14.88
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	19.05	24.09	32.38	28.12
FLEET (number)	166	160	155	154
FLEET GT (1000)	22.32	22.18	21.3	21.07
FLEET KW (1000)	62.65	61.11	58.61	58.15

#### *Pelagic trawl and seine >40m*

This fleet is mainly composed by the long distance purse seiners targeting mainly tropical tuna. This is one of the fleet with the highest value of landings for the Spanish fleets (per vessel), and the evolution till 2006 has been stable. In any case, the interest of this fleet comes from, given that it is a long distance fleet, and how it is going to be affected by the increase of fuel costs.

The evolution of the fleet is steady and there have not been changes in the number of vessels in the 2003 -2006 period. The increment of the cash flow in 2005 is remarkable, which can be seriously decreased in 2006 onwards given the rise of fuel prices (it is a long distance fleet). Noteworthy in this fleet is the dependency to the third countries fishing agreements made by the EU and the renewal of them.

	2003	2004	2005	2006
<i>Costs and earnings</i>				
INCOME (mln EUR)	215.88	223.55	236.48	
CASHFLOW (mln EUR)	16.51	17.19	35.27	
PROFIT (mln EUR)				
VALUE ADDED (mln EUR)	57.86	64.81	78.88	
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	1775	2271	1902	
CAPITAL VALUE (mln EUR)	403.6	525.52	517.39	
EFFORT DAYS (1000)	0.22	0.12	0.12	0.12



<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	1.27	0.08	0.19	0.24
FLEET (number)	36	38	34	35
FLEET GT (1000)	68.89	77.42	75.44	79.16
FLEET KW (1000)	102.19	113.53	109.29	113.82

### *Demersal trawl and seine 24-40m*

In this fleet the so called “300 fleet” is included which represents one of the most important fleet of the Spanish fleet fishing in the EU waters. The main target species are hake, megrim, anglerfish, and Nephrops. In recent year it has been affected by an emergency and recovery plans for the northern stock of hake, while now a long term management plan is to be introduced. The effect of the fuel prices increase is also an interesting thing to analyze given that currently (2003-2005) the cash flow is negative.

	2003	2004	2005	2006
<i>Costs and earnings</i>				
INCOME (mln EUR)	500.92	396.59	491.6	
CASHFLOW (mln EUR)	-48.09	-29.92	-32.66	
PROFIT (mln EUR)				
VALUE ADDED (mln EUR)	91.31	91.34	105.92	
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	10234	7234	10348	
CAPITAL VALUE (mln EUR)	801.52	693.72	875.76	
EFFORT DAYS (1000)	82.38	87.76	88.28	89.83
<i>Capacity indicators (total fleet)</i>				
LANDINGS WEIGHT (1000t)	57.9	66.57	81	82.28
FLEET (number)	525	536	535	534
FLEET GT (1000)	113.77	116.72	115.61	115.06
FLEET KW (1000)	219.06	220.48	214.85	209.89

## **6.21. Sweden<sup>1</sup>**

### *6.21.1. National fleet*

The important fleets of the Swedish fleets are the pelagic fleet targeting sprat and herring, the demersal fleets targeting shrimp, Nephrops, cod or a mix thereof. The pelagic fleets fish both for the fish meal industry and for human consumption depending on the market, whereas the demersal fleets are more or less only fishing for human consumption. The large fleets using passive gears targeting eel, cod, lobster and salmon only stand for a small amount of the total landings. The Swedish fleet fish in the Baltic, the North Sea and North East Atlantic. The fleets based on the Swedish west coast fish to a large extent in both the Baltic and the North Sea.

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<sup>1</sup> The data for 2004 only covers vessels earning more than 8,634 EUR. Fixed costs include both fixed costs and capital costs. For the 2006 data a new method to calculate capital cost has been used so the data is not directly comparable. Furthermore crew cost does not include payment to sole owners.

The Swedish fleet is an increasingly older and in numbers shrinking fleet. Based on the current biological situation and the quotas there is still a large overcapacity in the fleet. In four years around 150 vessels (10%) have left the vessel register. It is the smaller and less active vessels that have left and the effect on the landings has therefore not been noticeable. The engine power (kW) and especially the gross tonnage (GT) have only been marginally reduced; the kW has been reduced by only 2% and the GT by less than 1%. This can also be seen by looking at the development of average characteristics of the fleet. The vessels now have a higher kW and GT.

The large number of inactive vessels are all smaller vessels (less than 12 m) making up a latent capacity. Landings volume and the value of landings have only changed marginally over the years but the costs however have steadily increased leading to diminishing value added and profit. The value added for the total fleet has decreased by almost 40%. The main cause is the fact that the fuel price has increased by almost 90% from 2003 to 2006. Fuel costs now make up for around 50% of total variable costs for the trawlers. The increasing costs are now seriously affecting the companies and it has resulted in heavily reduced crews on board per trip, sometimes to dangerously low levels.

In 2007, a new pelagic system with individual vessel quotas was introduced in Sweden and now it is expected that the quotas might be made transferable (ITQ's) in the near future. This resulted in speculations starting in 2006 with many vessels changing owners and owners buying shares in other vessels. The speculations increased in 2007 and are expected to continue. The speculations have spread to other fleets as well pending a new government commission (inquiry) looking over the regulations on the fisheries.

#### **Basic data total national fleet**

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	102.19	105.93	99.04	101.8
VALUE ADDED (mln EUR)	54.18	43.6	31.18	33.21
CASHFLOW (mln EUR)	33.97	18.67	18.97	20.03
PROFIT (mln EUR)	26.05	12.19	10.63	7.37
<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	2 172	1 656	2 078	2 142
CAPITAL VALUE (mln EUR)	264.05	278.09	279.91	257.39
EFFORT DAYS (1000)	121.02	112.08	107.75	102.43
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	280.74	251.43	260.28	265.78
FLEET (number)*	1 715	1 597	1 603	1 564
FLEET GT (1000)*	43.93	44.28	44.26	43.92
FLEET KW (1000)*	220.62	217.09	218.75	216.4

<i>Average characteristics of vessels</i>				
GT	25.62	27.73	27.61	28.08
KW	128.64	135.94	136.46	138.36
AGE	26.6	26.01	27.79	28.52

Note: \* includes 294 inactive vessels with 1,137 GT and 15,329 kW for 2006, 368 inactive vessels with 1,516 GT and 18,800 kW for 2005, 329 inactive vessels with 1,081 GT and 16,172 kW for 2004 and 404 inactive vessels with 1,351 GT and 19,788 kW for 2003.

### Production and prices

As a total there has been little development in fish prices as well as in total landings between 2003 and 2006. Most fish prices have decreased. The price however varies between fleets. For cod the price is significantly higher when caught by hooks compared to trawl. This is, in combination with favourable weather conditions, one of the reasons why the number of vessels fishing with gears using hooks increased both during 2005 and 2006. The increase in vessels using hooks is also an effect of the salmon driftnet ban which is in full effect as of January 2008. However, the number of licenses (fishing vessels) has been gradually reduced from 2005.

Landings have increased for some species but decreased for others. Volume of landings for Nephrops increased by 28% and for herring the increase was 14% whereas for mackerel it decreased by 30% and for cod it decreased by 10%.

### **Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Atlantic herring	85.28	83.93	99.89	97.68	21.03	20.69	24.2	23.74	0.25	0.25	0.24	0.24
Atlantic cod	14.7	15.83	11.34	13.32	22.27	23.98	16.88	19.89	1.51	1.51	1.49	1.49
European sprat	75.58	80.99	84.73	75.01	11.01	11.8	12.14	10.78	0.15	0.15	0.14	0.14
Norway lobster	0.88	0.89	1.03	1.13	8.31	8.42	9.5	10.53	9.42	9.41	9.25	9.28
Northern prawn	2.21	2.29	2.12	2.32	9.99	10.33	9.42	10.35	4.52	4.52	4.44	4.46
Sandeels	21.91	34.3	8.8	32.76	2.96	4.63	1.17	4.36	0.13	0.13	0.13	0.13
European pilchard(=Sardine)	0.01	0.06	35.08	32.09	0	0.01	4.44	4.07	0.13	0.13	0.13	0.13
Atlantic mackerel	4.42	4.12	4.05	3.02	4.69	4.38	4.22	3.16	1.06	1.06	1.04	1.05
Vendace	1.54	1.8	1.58	1.15	1.29	5.41	2.88	2.32	0.84	3	1.83	2.02
Eel	0.2	0.19	0.23	0.22	1.36	1.23	1.53	1.46	6.66	6.66	6.54	6.57
Other species	74	27.03	11.44	7.09	19.27	15.06	12.66	11.14	0.26	0.56	1.11	1.57

### Composition by fleet

The larger trawlers, both demersal and pelagic, are doing relatively well with larger gross value added figures. The large pelagic trawlers and seiners, 24-40m and above 40m, targeting mainly industrial species like sprat, herring and mackerel stand for more than 80% of all landings in volume but only 40% of the value of landings. The two large demersal fleets, 12-24m and 24-40m, that target high price species like cod, shrimp (*Pandalus Borealis*) and Nephrops also stand for 40% of the value of landings but only 10% of the volume. The rising fuel costs are mostly affecting the more fuel intensive trawl fleets but do not really show in the gross value added figures below.

The fleets with the lowest profitability are the ones using passive gears and the small trawlers. Vessels using passive gears mainly target cod, Nephrops, lobster, eel and salmon and the small trawlers mainly target Nephrops, shrimp (*Pandalus Borealis*) and herring. Many of these vessels, especially those based on the east coast, also have further processing or run other businesses i.e. selling fish at markets or in stores. These incomes do not show up in the data so the gross value added is probably somewhat underestimated. Also there are many vessels that are only used for seasonal fisheries targeting for instance eel and vendace in the northern part of the Gulf of Bothnia. The employment on the other hand is probably overestimated for the above mentioned fleets.

#### **Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
Drift and fixed nets 12-24 m	0.59	0.97	21	3.71	46	0.27
Demersal trawl and seiner <12 m	1.29	3.24	71	10.6	75	0.72
Demersal trawl and seiner 12-24 m	22.87	27.71	158	45.22	353	7.05
Demersal trawl and seiner 24-40 m	7.54	10.58	27	16	111	2.31
Gear using hooks 12-24 m	0.68	1.16	13	2.07	29	0.34
Passive gears <12 m	5.98	12.81	912	56.99	1 193	3.35
Pelagic trawl and seiner 12-24 m	5.21	1.38	11	3.65	23	0.26
Pelagic trawl and seiner 24-40 m	122.5	25.1	41	38.48	186	11.69
Pelagic trawl and seiner >40m	99.13	18.85	13	24.35	126	7.22

#### Trends and outlook

The combination of increased fuel costs and reduced fish stocks is demonstrated in the productivity of the Swedish fleet. Most fleets did have a negative change in productivity between 2005 and 2006. The only fleets that improved their performance were gears using hooks and demersal trawlers and seiners larger than 12 meters. The later ones target high price species and their landings increased leading to larger income per vessel. For the vessels using hooks, the weather conditions were favourable and they also receive significantly better prices for cod than the trawlers. The overall negative change in productivity will probably continue unless drastic measures are taken.

The new Swedish operational programme for the new structural funds (EFF) period is focusing on reducing the fleet. Sweden has recently adopted a new plan aiming to reduce the trawl capacity targeting cod in the Baltic with 10% until 2010. Furthermore the government is considering, but has not yet decided, on making the individual vessel quotas for the pelagic vessels transferable following a government commission looking into the possibilities of switching to ITQ's.

**Change in productivity by fleets, 2005/2006 (%)**

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
Drift and fixed nets 12-24 m	-18.61	-29.32	-23.45	-42.52	-38.47	5.59
Demersal trawl and seine <12 m	-3.9	-18.91	-22.05	-41.01	-30.39	6.21
Demersal trawl and seine 12-24 m	6.11	2.44	6.93	-19.31	-22.06	26.04
Demersal trawl and seine 24-40 m	16.6	-3.65	21.15	38.58	15.75	-11.18
Gear using hooks 12-24 m	53.8	43.37	20.49	161.32	212.66	16.81
Passive gears <12 m	-11.21	-17.77	-0.59	-42.01	-53	38.09
Pelagic trawl and seine 12-24 m	-5.43	0.29	-2.98	593.51	563.97	35.76
Pelagic trawl and seine 24-40 m	-5.44	-7.83	7.71	39.68	55.4	6.68
Pelagic trawl and seine >40m	5.74	11.83	6.05	83.51	64.51	-15.28

The landings decreased during 2007 compared to 2006. Pelagic species like herring and sprat represented the biggest share of the decrease but also species like cod and saithe decreased. Landings of Nephrops and shrimp (*Pandalus Borealis*) on the other hand increased. For many species the prices rose, for instance for cod, Nephrops and pelagic species like sprat and herring. The average fuel price for 2007 did not increase significantly compared to 2006 but the variations during the year were large.

For the first months of 2008 the fuel price has gone up with 12% compared to the average of 2007. Based on preliminary landings data the volume of landings for pelagic species have increased Jan-Feb 2008 compared to the same period in 2007 whereas Nephrops, shrimp (*Pandalus Borealis*) and cod have decreased during the same months. It is however difficult to make predictions based on just a few months on the economic performance of 2008.

*6.21.2. Fleets of special interest**Pelagic trawl and seine 24-40m*

The fleet fish in both the North Sea and the Baltic and they target mainly pelagic species such as herring, sprat and mackerel. The prices for herring for consumption have risen which has resulted in more fish than before being landed for consumption. Most vessels have their home port on the west coast of Sweden. The 41 vessels stand for a little more than 45% of all landings in volume and 25% of all landings in value. This is one of the reasons why this fleet has been selected as one to be highlighted. It also gives a good overview of what is going on in the pelagic fleet. 2004 was a very bad year for the all pelagic fleets, including the 24 to 40 meter vessels, resulting in negative profit. Since then however they are doing somewhat better, value added and profit has increased significantly which seems to be the result of higher catches. They used less effort but landed more in 2006 compared to previous years.

From January 2007 these vessels have individual vessel quotas and the owners in this fleet started to purchase other vessels or shares of vessels in 2006 trying to get track record and potentially higher quota shares. One reason behind this is the expectations that these individual vessel quotas will be made transferable.

	2003	2004	2005	2006
Costs and earnings per vessel				
INCOME (1000EUR)	627.38	521.30	647.57	612.20
CASHFLOW (1000EUR)	85.95	46.74	58.65	9.02
PROFIT (1000EUR)	54.76	-9.57	121.89	102.68
VALUE ADDED (1000EUR)	214.52	120.43	232.43	285.12
Other economic indicators per vessel				
EMPLOYMENT (FTE)	6.17	6.39	5.81	4.54
CAPITAL VALUE (1000EUR)	2 865.71	1 556.74	1 957.84	1 402.44
EFFORT DAYS	151.19	127.61	135.41	119.02
Capacity indicators (total fleet)				
LANDINGS WEIGHT (1000t)	143.93	116.5	119.93	122.5
FLEET (number)	42	46	37	41
FLEET GT (1000)	12.36	12.97	12.4	13.47
FLEET KW (1000)	37.15	38.54	36.04	38.48

#### *Demersal trawl and seine 12-24m*

Most vessels in this fleet have their home port on the west coast of Sweden. Within this fleet there are vessels mainly targeting shrimp (*Pandalus Borealis*), vessels mainly targeting Nephrops and vessels mainly targeting cod. The fleet fish in both the Baltic and the North Sea, vessels targeting Nephrops and shrimp mainly fish in Skagerrak and Kattegat and are rather stationary compared to the vessels targeting cod. This is a fuel intensive fleet and the fuel costs have doubled in just four years. In the fleet there are rather many sole company owners working in the crew, implying that the cost is underestimated which means that the profit most definitely is lower than what is showed here. It is probable that it might even be negative for 2006.

	2003	2004	2005	2006
Costs and earnings per vessel				
INCOME (1000EUR)	152.86	176.44	165.23	175.38
CASHFLOW (1000EUR)	12.40	13.75	12.15	6.27
PROFIT (1000EUR)	20.84	47.50	33.76	6.77
VALUE ADDED (1000EUR)	64.09	81.69	55.70	44.62
Other economic indicators per vessel				
EMPLOYMENT (FTE)	2.64	2.40	2.40	2.23
CAPITAL VALUE (1000EUR)	413.12	457.56	419.40	458.04
EFFORT DAYS	118.12	112.88	113.62	112.78
Capacity indicators (total fleet)				
LANDINGS WEIGHT (1000t)	14.71	21.57	21.05	22.87
FLEET (number)	154	160	149	158
FLEET GT (1000)	9.07	9.85	9.21	9.47
FLEET KW (1000)	42.9	45.09	42.34	45.22

#### *Passive gears <12m*

The largest fleet is the vessels using passive gears less than 12 meters. The fleet consists of 912 vessels of which 491 vessels had a value of landings under 8,579 EUR. Many vessels are only used for part of the year in seasonal fisheries and many vessels are owned by persons whose main source of income is not fishing. The fleet includes vessels targeting eel, vessels targeting Nephrops, cod etc. They are rather stationary fishing either on the west coast (Skagerrak and Kattegat), south coast or the east coast of Sweden. They are mostly owned by a sole company owner and therefore the crew cost (which does not include payments to sole company owners) is underestimated. It is common for owners of vessels, especially for those based on the east coast of Sweden, to also have further processing such as smoking or selling fish at markets or simply running other types of businesses. The income from such activity is not shown here. Despite of this the profit is probably still overestimated and might even have been negative for 2006.

	2003	2004	2005	2006
Costs and earnings per vessel				
INCOME (1000EUR)	16.03	18.04	15.82	14.05
CASHFLOW (1000EUR)	0.33	0.62	0.72	1.01
PROFIT (1000EUR)	12.24	5.98	6.33	1.12
VALUE ADDED (1000EUR)	12.74	11.31	7.10	3.67
Other economic indicators per vessel				
EMPLOYMENT (FTE)	1.20	0.67	1.20	1.31
CAPITAL VALUE (1000EUR)	10.79	20.65	23.82	35.43
EFFORT DAYS	82.48	79.43	79.86	71.33
Capacity indicators (total fleet)				
LANDINGS WEIGHT (1000t)	8.51	8.64	7.02	5.98
FLEET (number)	951	908	880	912
FLEET GT (1000)	4.31	4.21	4.09	4.1
FLEET KW (1000)	56.7	55.98	55.68	56.99

## 6.22. United Kingdom<sup>2</sup>

### 6.22.1. National fleet

Over the last 10 years the UK fishing industry has undergone significant change. Fluctuations in the volume and value of landings, combined with increasing operating costs (driven by high fuel and gear prices) and tighter fisheries management measures have resulted in a struggle by many sectors of the UK fishing fleet to achieve profitability. The whole structure of the fishing fleet has changed significantly since the mid 1990's, with a large number of fishermen leaving the industry.

The financial performance of the UK fishing fleet in 2006 continued to improve since a low point in 2003. Although vessel earnings improved significantly across a number of fleets, rising operating costs (particularly fuel) and reduced fishing opportunities meant that achieving profitability was a major challenge for most of the UK fishing fleet in 2006. In particular:

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<sup>2</sup> The vast majority of UK fleets have been reported, including the pelagic and under 10 metres sectors for the first time. The only exceptions are the Drift and Fixed nets fleets and the polyvalent fleets. It was not possible to collect financial data for these fleets.

- The total turnover (sales value) of the UK fishing fleet was an estimated € 895.7 mln<sup>3</sup> in 2006, an increase of 3% between 2005 and 2006.
- Earnings increased in most vessel fleets between 2005 and 2006.
- Expenditure on marine fuel was around € 143.6 mln in 2006, an increase of 11% between 2005 and 2006.
- Average crew wages decreased in most vessel fleets between 2005 and 2006, a trend that continues since the late 1990's.
- The total gross value added (GVA) generated by the UK fishing fleet was around € 353.8 mln in 2006, an increase of 26% compare 2005.

At the end of 2006 the UK fishing fleet consisted of 6,818 registered vessels, with a combined registered tonnage of just under 225,000 tonnes. Almost 75% of vessels were 10 metres or under in length, which equated to around 10% of the total UK registered tonnage. The UK fleet has contracted in size over the last 10-15 years, primarily in the over 10 metres category. There has been a trend in capacity aggregation towards fewer, larger vessels in recent years. The number of vessels in the UK fleet fell by 25% between 1996 and 2006, tonnage reduced by 27% and vessel power reduced by only 19%. A combination of vessel decommissioning schemes, policy induced structural cuts; capacity aggregation and technological advancement each influenced the structure of the fleet during this period.

The average vessel age across the industry has decreased; at the end of 2006 the average age of all UK vessels was 21 years compared with an average age of 25 years in 2001. This is despite factors such as a poor financial climate, the short-term nature of fisheries management, reduced fishing opportunities and prohibitive barriers to entry. The decommissioning of older, more inefficient vessels, the introduction of a number of replacement vessels and improved investment confidence has helped modernisation in a number of fleets.

The UK fleet is extremely diverse in nature. It consists of three major sectors; the pelagic, the demersal and the shellfish/inshore sectors. Data on the financial performance of a major fleet from each of these sectors is presented later in this chapter, along with an overview of each of the main sectors.

#### **Basic data total national fleet**

	2003	2004	2005	2006
<i>Economic indicators</i>				
VALUE OF LANDINGS (mln EUR)	763.7	756.1	866.0	877.0
VALUE ADDED (mln EUR)	-	-	445.9	353.8
CASHFLOW (mln EUR)	-	-	222.5	242.2
PROFIT (mln EUR)	-	-	64.1	79.4

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<sup>3</sup> This includes an estimate for non fishing income, which was around € 18 mln.



<i>Other economic indicators</i>				
EMPLOYMENT (FTE)	8088	8292	7909	7973
CAPITAL VALUE (mln EUR)	-	-	-	-
EFFORT DAYS (1000)	389.7	366.9	353.7	438.9 <sup>4</sup>
<i>Capacity indicators</i>				
WEIGHT OF LANDINGS (1000t)	598.3	627.4	688.4	586.1
FLEET (number)*	7258	7092	6827	6818
FLEET GT (1000)*	256.5	231.5	222.1	224.8
FLEET KW (1000)*	978.4	921.1	892.5	896.4
<i>Average characteristics of vessels</i>				
GT	35.3	32.6	32.5	32.7
KW	134.8	129.9	130.7	130.5
AGE	20.5	20.8	20.9	21.2

Note: \* includes 2,306 inactive vessels with 21,000 GT and 145,000 kW in 2006

### Production and prices

Over the last few years, the business culture within the UK industry has changed significantly. The introduction of the Registration of Buyers and Sellers legislation (RBS) in 2005 has helped tackle the issue of under-reported landings by the UK fleet and as a result, prices have increased. The reward for those vessel owners and skippers who have successfully adapted their business management skills are improved earnings and improved knowledge of their target markets.

Most UK fish prices increased between 2003 and 2006. Nephrops became the most important catch in terms of landings value in 2006, overtaking mackerel for the first time. The total value of Nephrops landed by the UK fleet almost doubled between 2003 and 2006. Quota reductions for mackerel reduced the volume landed, although this appears to have had a positive impact on prices. Haddock prices almost doubled between 2003 and 2006, despite the total volume landed remaining stable. Although lobster prices remained relatively stable, the total volume and value of lobsters landed by the UK fleet more than doubled between 2003 and 2006.

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<sup>4</sup> Total effort (days at sea) by the UK fleet gradually decreased between 2003 and 2006. The reported increase in effort between 2005 and 2006 is the result of effort data being available on the under 10 metre fleet for the first time. Therefore effort data for 2003-2005 is underestimated and should not be compared.

**Landings weight, value and average prices, national fleet**

	Weight (1000t)				Value (mln EUR)				Price (EUR/kg)			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Norway lobster	27.84	30.57	34.09	41.31	65.25	71.05	87.17	116.64	2.34	2.32	2.56	2.82
Atlantic mackerel	182.28	174.37	155.11	102.02	82.55	85.07	99.61	79.06	0.45	0.49	0.64	0.77
Haddock	41.36	46.08	48.34	39.73	28.12	33.41	43.06	45.74	0.68	0.73	0.89	1.15
Atlantic herring	90.37	96.23	125.73	108.53	27.28	15.18	26.84	34.37	0.3	0.16	0.21	0.32
Anglerfishes nei	11.27	11.76	14.35	13.17	24.09	25.3	35.81	33.9	2.14	2.15	2.5	2.57
Great Atlantic scallop	18.84	20.54	20.21	18.6	28.72	31.19	33.03	33.4	1.52	1.52	1.63	1.8
Atlantic cod	21	21.02	20.7	20.6	29.66	29.77	30.83	29.03	1.41	1.42	1.49	1.41
Edible crab	19.65	17.39	17.76	22.78	20.74	18.15	20.4	28.24	1.06	1.04	1.15	1.24
European lobster	0.95	1.12	1.28	2.34	9.64	10.53	11.59	27.04	10.14	9.4	9.08	11.53
Common sole	2.21	2.09	2.06	2.09	14.4	14.02	15.05	17.38	6.52	6.7	7.3	8.31
Other species	182.49	206.17	248.73	221.31	158.67	151.02	148.61	145.74	0.87	0.73	0.6	0.66

**Composition by fleet**
**Fleet characteristics, 2006**

	Volume of landings (1000t)	Value of landings (mln EUR)	Number of vessels	Total kW (1000)	Employment (FTE)	Gross value added (mln EUR)
<i>Mobile</i>						
Mechanical dredge <12m	2.7	5.7	131	11.3	89	2.5
Mechanical dredge 12-24m	15.8	19.2	96	23.1	305	11.3
Mechanical dredge 24-40m	9.1	12.0	22	12.0	139	4.8
Mechanical dredge >40m	5.0	-	1.0	0.5		-
Demersal trawl/seine <12m	9.9	21.8	436	47.6	643	13.3
Demersal trawl/seine 12-24m	71.3	134.5	507	135.3	1986	67.2
Demersal trawl/seine 24-40m	59.3	84.6	109	71.7	769	44.5
Demersal trawl/seine >40m	23.0	25.8	14	25.2	203	9.9
Beam trawl <12m	0.3	0.7	28	2.4	17	-
Beam trawl 12-24m	2.5	5.7	32	6.4	92	-
Beam trawl 24-40m	12.5	26.9	52	40.9	281	13.1
Beam trawl >40m	8.3	15.2	15	22.6	84	3.2
Pelagic trawl <12m	0.8	0.5	143	4.9	43	-
Pelagic trawl 12-24m	1.3	0.5	3	1.1		1.4
Pelagic trawl 24-40m	0.4	1.0	3	2.8	178	-
Pelagic trawl >40m	313.7	128.0	33	129.1		110.5
<i>Passive</i>						
Pots and traps <12m	27.9	64.5	2135	132.8	1,539	50.7
Pots and traps 12-24m	14.2	18.9	84	16.5	415	13.1
Pots and traps 24-40m	2.2	2.8	5	2.4		-
Gears using hooks <12m	0.12	0.4	74	4.7	23	0.4
Gears using hooks 12-24m	0.0	0.0	3	0.6		-
Gears using hooks 24-40m	3.9	6.2	13	6.1	218	12.6
Drift and fixed nets <12m	1.8	4.2	377	23.8	-	-

Drift and fixed nets 12-24m	2.4	4.7	23	4.6	-	-
Drift and fixed nets 24-40m	2.2	3.9	14	7.7	-	-
<i>Polyvalent</i>						
PMP <12m	0.5	0.9	56	3.1	49	1.1
MGP <12m	0.8	0.7	21	1.9	-	-
PGP <12m	0.9	1.4	67	5.6	-	-

#### Change in productivity by fleets, 2005/2006 (%)

	Income /vessel	Yearly catch /vessel	Income /days at sea	GVA /days at sea	GVA /FTE	Crew share /FTE
<i>Mobile</i>						
Mechanical dredge <12m	- <sup>5</sup>	-	-	-	-	-
Mechanical dredge 12-24m	6.2	-23.3	15.8	0.9	18.5	31.3
Mechanical dredge 24-40m	-16.1	-10.3	-11.7	-51.6	-49.9	-18.5
Demersal trawl/seine <12m	-	-	-	-	-	-
Demersal trawl/seine 12-24m	16.3	-1.6	22.6	20.7	18.3	11.2
Demersal trawl/seine 24-40m	15.3	1.7	15.9	34.3	25.3	16.2
Demersal trawl/seine >40m	-38.4	-8.9	-36.3	-31.6	-28.5	6.3
Pelagic trawl 12-24m	-40.1	-25.4	-6.0	-33.9	-	-
Pelagic trawl >40m	9.9	-17.8	37.2	35.8	-	-
Beam trawl 24-40m	11.5	3.4	10.9	75.9	76.3	-13.7
Beam trawl >40m	16.3	-0.7	24.5	45.9	28.6	-21.7
<i>Passive</i>						
Pots and traps 12-24m	4.2	-8.9	16.8	-19.5	-37.6	-35.5
Gears using hooks 24-40m	87.5	-19.3	99.4	122.1	-	-

#### Outlook for 2007 and 2008

The financial outlook for the UK fleet in 2007 is the continuation of stable earnings increased earnings for most fleets, driven by strong market prices. Expenditure on fuel remains the biggest financial concern for the industry, with the average fuel price marginally exceeding that experience in 2006. Profit levels and profitability are therefore expected to vary significantly between fleets.

The financial outlook for 2008 is much bleaker. The significant increase in fuel price indicates that if the trend continues, despite the continuation of strong market prices for fish, profits and profitability are likely to be severely affected to the extent that a significant number of UK vessels are likely to generate losses.

#### 6.22.2. *Fleets of special interest*

##### *Demersal Sector*

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<sup>5</sup> The results of the change in productivity indicators have been omitted due to a change in DCR length classifications on the national fleet register. Throughout this document the data relating to 2003-2005 in the VL0012 length category consists only of 10-12 metre vessels. 2006 was the first year that landings and effort data for the under 10 metres was available for analysis.

The downturn in the financial performance of the UK demersal sector has been well documented. In the 1990's right up until 1998 the whitefish sector was relatively healthy with stable stocks and quotas, high quota values and re-investment taking place during this period. In 1999 scientific advice suggested quotas be drastically cut, pointing to over fishing and poor stocks on traditional whitefish grounds. The significant reductions in fishing opportunities coupled with the doubling of fuel costs severely affected the earnings capacity and profitability of the whitefish fleet. Decommissioning schemes were introduced in 2001 and 2003 to tackle excess fleet capacity and a significant number of whitefish vessels altered their fishing gear to become dedicated Nephrops trawlers. Although painful at the time, the whitefish sector is now benefiting from a period of relative stability where fewer vessels with larger quota holdings have been targeting the same whitefish stocks. Vessel earnings and crew share has subsequently improved.

The total value of whitefish landings by UK vessels in 2006 was € 354.9 mln, a decrease of 23%<sup>6</sup> compared with 1996. Whitefish vessel earnings improved in a number of fleets in 2006; however high fuel prices, increased management costs (quota leasing and days at sea purchase) and lower TACs have continued to impact on fleet profitability. Although strict recovery measures are still in place and the TACs for some whitefish stocks continue to decrease, others such as haddock appear to be in good health. The whitefish sector has particularly benefited from the introduction of the Registration of Buyers and Sellers legislation (RBS) in 2005. Additional reporting requirements have helped ensure that undeclared landings in the sector are no longer a significant issue. As a result, average prices have increased, and confidence to invest in the whitefish sector has subsequently improved.

#### *Mobile - Demersal trawl and seine 24-40m*

This fleet is the most important mobile gear fleet in terms of landings value (apart from the pelagic fleet). A number of UK fleets (demersal and Nephrops) combine to form this (DCR) fleet. These vessels use a variety of fishing gears, including single and pair seines; and single and pair trawls (both single and twin rig). These vessels mainly operate in the North Sea, West of Scotland, Kattegat and Skagerrak and the Norwegian Sector.

	2003	2004	2005	2006
Costs and earnings per vessel				
INCOME (1000 EUR)	500.6	1113.4	1005.6	1158.8
CASHFLOW (1000 EUR)	77.2	171.6	58.1	101.8
PROFIT (1000 EUR)	7.7	12.0	7.5	69.7
VALUE ADDED (1000 EUR)	196.9	437.9	305.5	408.0
Other economic indicators per vessel				
EMPLOYMENT (FTE)	4.9	6.6	6.6	7.1
CAPITAL VALUE (1000 EUR)			1004.1	1178.8
EFFORT DAYS	219.9	239.8	216.3	215.0

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<sup>6</sup> Not adjusted for inflation

Capacity indicators (total fleet)				
LANDINGS WEIGHT (1000t)	63.81	61.13	62.56	59.28
FLEET (number)	159.0	120.0	117.0	109.0
FLEET GT (1000)	43.0	32.9	31.6	29.8
FLEET KW (1000)	103.1	78.7	75.3	71.7

### *Pelagic Sector*

One of the smallest and certainly the most powerful UK fleet is the pelagic fleet. The majority of the 33 UK pelagic trawlers are based in the North East of Scotland and in Shetland. While smaller and older pelagic vessels have reduced in number, favourable economic conditions resulted in considerable industry investment towards the end of the 1990's. Although the number of pelagic vessels reduced between 1996 and 2006, the introduction of these larger, more powerful vessels resulted in an increase in tonnage and power. Between 1995 and 1999 landings into the UK by the pelagic fleet reduced significantly as these vessels started landing abroad more frequently. However, strong prices combined with investment in onshore pelagic processing facilities in Fraserburgh, Lerwick and Peterhead towards the end of this period ensured the trend in foreign landings was curtailed.

The total value of recorded landings by the UK pelagic fleet in 2006 was € 182.5 mln, an increase of 38% since 1996. During this period the value of landings abroad by UK vessels decreased by over 13%. Strong prices ensure the sector had excellent years in both 2005 and 2006. The pelagic sector has performed consistently well in recent years and the main stocks targeted by the pelagic fleet (herring and mackerel) have been relatively stable. The demand for fishmeal by the aquaculture sector is likely to increase, keeping prices firm. Stable stocks, strong prices and considerable re-investment indicate a healthy economic position in 2006.

### *Mobile – Pelagic trawlers >40m*

	2003	2004	2005	2006
Costs and earnings per vessel				
INCOME (1000 EUR)			171.9	178.1
CASHFLOW (1000 EUR)			52.9	71.6
PROFIT (1000 EUR)			16.1	44.3
VALUE ADDED (1000 EUR)			107.8	110.5
Other economic indicators per vessel				
EMPLOYMENT (FTE)	324	309	212	178
CAPITAL VALUE (1000 EUR)				757.1
EFFORT DAYS	112.9	125.5	120.0	96.1
Capacity indicators (total fleet)				
LANDINGS WEIGHT (1000t)	310.3	345.8	404.7	313.7
FLEET (number)	41	38	35	33
FLEET GT (1000)	61.2	59.8	54.7	53.2
FLEET KW (1000)	141.5	144.3	133.3	129.1

### *Shellfish/Inshore Sector*

Three in every four UK vessels currently operate in inshore waters and target a variety of stocks, particularly shellfish. Shellfish stocks have been relatively stable in recent years and a number of ports previously reliant on whitefish species are now dedicated shellfish ports. This diverse fleet catches a range of species including Nephrops, scallops, crabs and lobsters. They use a variety of capture methods including potting/creeling, dredging and trawling. The value of shellfish landings was around € 358 mln in 2006, an increase of 65% since 1996. The vast majority of shellfish species caught by the UK fleet are landed into the UK. Nephrops are the most important shellfish species in terms of volume and value, accounting for 30% and 48% of the total shellfish catch respectively in 2006.

Average shellfish prices rose steadily between 2001 and 2006 and earnings particularly improved in the Nephrops sector. However, increases in operating costs (mainly fuel and quota for Nephrops trawlers and fuel and steel for scallop dredgers) reduced profitability in some fleets. Some of the issues currently facing the shellfish sector include: pressure on inshore stocks, regulating orders, impact of hygiene legislation and conservation requirements. Closed areas are also a particular concern for inshore vessels as the socio-economic consequences of vessel displacement are significant. Most shellfish/inshore vessels are based in remote coastal communities and provide an important contribution to the social fabric of these areas.

#### *Passive – Pots and traps 12-24m*

	2003	2004	2005	2006
Costs and earnings per vessel				
INCOME (1000 EUR)	310.5	302.2	356.8	371.5
CASHFLOW (1000 EUR)	84.9	-2.0	99.9	68.9
PROFIT (1000 EUR)	54.3	-2.6	57.1	47.6
VALUE ADDED (1000 EUR)	183.7	131.3	216.6	155.6
Other economic indicators per vessel				
EMPLOYMENT (FTE)	5.1	5.1	4.3	4.9
CAPITAL VALUE (1000 EUR)			267.9	247.4
EFFORT DAYS	188.2	184.4	189.4	168.9
Capacity indicators (total fleet)				
LANDINGS WEIGHT (1000t)	16.3	16.2	14.8	14.2
FLEET (number)	83.0	85.0	80.0	84.0
FLEET GT (1000)	3.9	4.0	3.8	4.0
FLEET KW (1000)	16.2	16.8	15.8	16.5

## **7. PRICE ANALYSIS**

### **7.1. What determines fish prices?<sup>7</sup>**

The purpose of this section is to give a general introduction of what determine the trends in the first-hand price of fish within EU. Factors which potentially can explain why prices of individual fish species increase or decrease are identified, although it is underlined that these factors can only

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<sup>7</sup> This section has been prepared by Max Nielsen, Institute of Food and Resource Economics (FOI).

explain a part of the price development. An element of the price variation remains unexplainable. A structured method to interpret national price developments is presented, but the actual interpretation is only made in a few examples. Price developments are explained in the national chapters.

The starting point is that “a fish is not just a fish”. Several different fish species exist and the price trends of these species might differ substantially. What might be an important determinant of the price of one fish species might not have any relevance for another. Hence, price determinants of fish need to be identified for individual species.

Factors which, according to economic theory potentially can determine the price of an individual fish species at the market includes:

- Size and quality of the fish and catch method
- Supply
- Demand
- Exchange rates

The size of a fish is important since purchasers are prepared to pay a larger amount for one kilo of a large fish than for one kilo of a small fish for several fish species. Catch method is also important since a fish caught e.g. by long line might be less damaged and therefore of higher quality than a fish caught with trawl. Supply is important for most species and in particular supply of the individual species, but for many species also supply of substitutes are important. Increasing supply causes price falls. Changing demand can also contribute in explaining price variation. Population and income growth increase demand and thereby prices. The income effect depends on whether the species are luxury, necessary or inferior goods. Income growth causes price increases for luxury goods, since demand increase considerable with income. Such goods include sole and lobster. Prices also rise for necessary goods, but the price rise is less than income. Such goods include plaice and cod. For inferior goods prices decrease with rising income, since consumers prefer something else. Small herring might be an example of an inferior good. Changing consumer preferences can also be important for prices. For example if the bird-flu disease makes consumers eat less poultry, the effect might be that demand and prices of fish grow. Finally, an important price determinant of fish is exchange rates, since the EU fish markets are part of larger geographical markets for many fish species. EU is a large net-importer of fish and of several individual fish species. For example, a strengthening of the €/US\$ exchange rate gives price fall in EU for the species where EU is net-importer, since import will rise and exporters receive more for their goods in their own currency. Falling import prices will on the contrary result in reduced domestic prices.

Market supply and demand are potential important price determinants, but at what market? A market is defined as “the area within which the price is determined, allowances being made for quality differences and transportation costs”. Hence, the prices of two species are formed within the same market if the two prices follow each other over time. The price levels might differ, but the species remain within the same market as long as the prices move together over time. Furthermore, the price of the same species in two different countries is also formed within the same market provided that the two prices move together over time.

The sizes and boundaries of markets are important for demand and supply, and therefore for prices. Based on existing economic literature, the presumptions are that markets for individual species are linked geographically within Europe and in several cases worldwide. The presumptions is further that markets between different fish species are linked in some cases, but not in others, and that markets for fish and other food products are linked only loosely. In explaining the price development, it is necessary to focus explicitly of the market size of the individual species - geographically and in relation to other fish species.

Using the above method, three examples are presented below. Factors contributing in explaining the development in the Danish landing price of cod, herring and sole are identified.

The market for cod is characterised by being part of a larger whitefish market consisting of several species including hake and haddock. EU is a large net-importer of both cod and other whitefish and Norway and Iceland are the main suppliers of cod. The consumption is EU-wide and cod is a necessary good. The Danish landing price is shown in Table 7.1 for 2002-2006 together with the development in potential price determinant of cod.

**Table 7.1 Potential price determinants of cod landed in Denmark**

	2002	Change (%)			
		2003	2004	2005	2006
Price (€/kg.)	2.44	-15	-2	+12	+3
<u>Potential price determinant:</u>					
Catch of cod in EU (tonnes)	163,000	-13	+7	-17	0
Catch of cod globally (tonnes)	903,000	-6	+5	-6	.
Catch of cod, hake and haddock globally (tonnes)	8,461,000	+11	0	-5	.
Purchasing power in EU	.	+1.3	+2.4	+1.7	+2.8
€/US\$ exchange rate	0.97	+15	+14	0	0

The catch of cod does not seem to have the expected effect on cod prices every year, neither catch in EU or globally. The main price determinants for cod rather seem to be the global whitefish supply (of cod, hake and haddock), since prices decrease when supply increases and vice versa. This was expected since the cod market is part of the global whitefish market. Purchasing power does not seem to have large effect on the price of cod, but the €/US\$ exchange rates might have some effect. The strengthening of the € might contribute to explain the fall in the cod price in 2003-2004. Hence, the main determinants of cod prices are thus supposed to include global catches of whitefish and exchange rates.

Herring is mainly consumed in northern Europe including EU and Russia north of a line drawn through Paris and Moscow. Germany and Russia are the largest consuming countries with processed herring (mainly pickled) sold in Germany and frozen herring sold in Russia. Norway is the largest supplier. Norwegian herring originate mainly from the Atlantoscandic stock. Denmark is the second largest supplier and the largest processing country. EU as a whole is a net-exporter of herring. Herring is a relatively cheap product and therefore either a necessary or inferior good. The Danish landing price is shown in Table 7.2 for 2002-2006 together with the development in potential price determinants of herring.

**Table 7.2 Potential price determinants of herring landed in Denmark**

	2002	Change (%)			
		2003	2004	2005	2006
Price (€/kg.)	0.33	-25	-5	+25	+25
<u>Potential price determinant:</u>					
Catch of herring in EU (tonnes)	652,000	+3	+10	+13	-10
Catch of herring globally (tonnes)	1,876,000	+4	-4	+16	.
Purchasing power in EU	.	+1.3	+2.4	+1.7	+2.8
€/RUB exchange rate	35.06	-1	+3	-2	-3



Catches of herring in EU or globally is expected to contribute in the explanation of the relative large price changes. In particular, the catch of herring in EU seems to explain part of the price variation, although the increase in both catch and price in 2005 remain unexplained. Purchasing power does not seem to be of importance. The €/RUB exchange rate might potentially have an effect, but the rate is stable and can therefore not explain the price variation. The 2005 development is not explained and the causes remain a matter of speculation. In 2000, the herring prices doubled and remained at the high level in 2001. Causes included normalisation of the market after devaluation of the rouble in 1998, large fluctuations in the quotas in the main Norwegian Atlantoscandic fishery and possibly also that sellers and purchasers faced problems in identifying the potential of the market. In 2003 and 2004, quotas increased and prices decreased. Prices went up again in 2005. Hence, the 2005 development might possibly be explained by “normalisation” of the market after more simultaneous shocks which made the market unpredictable. Given this situation, the main price determinant for herring is presumed to be the catch, with the 2005 development explained by normalisation on the market.

The EU market for sole is characterised by being self-sufficient with a limited export from outside the EU. The North Sea sole stock is the most important supply source, and the Netherlands is the largest supplier. Sole is a luxury good. The Danish landing price is shown in Table 7.3 for 2002-2006 together with the development in potential price determinants of sole.

**Table 7.3 Potential price determinants of sole landed in Denmark**

	2002	Change (%)			
		2003	2004	2005	2006
Price (€/kg.)	9.12	+5	-2	+8	+21
<u>Potential price determinant:</u>					
Catch of cod in EU (tonnes)	33,492	+8	-3	-6	-9
Purchasing power in EU	.	+1.3	+2.4	+1.7	+2.8

The catch of sole within EU has the expected effect on the price in 2005-2006, where the price increased as a result of falling catches. In 2004, both catch and price are relatively stable, where the price contrary to expectations increases together with increasing catches in 2003. The income effect is less obvious, but increasing purchasing power in 2006 might have contributed to explaining the relative large price increase. The increasing price in Denmark in 2003 remain a matter of speculation, but the fact that sole is mainly caught in a seasonal fishery, where the length of the season is important for the quality of the fish, might be a part of the explanation. Thus, EU catches and income developments are presumed important price determinants for sole prices.

Using the method in the above examples, price trends and drivers can potentially be identified for fish species of national importance.

## **7.2. Development in EU-fish prices**

In order to describe the development in fish prices within the European Union, a distinction is made between two overall regions, i.e. the Mediterranean and the Atlantic Ocean. It must initially be recognized that these areas are large in size and covers many different types of fishing activities. The price developments may therefore differ on a country and fleet level, but this is to some extent examined in the country descriptions.

Table 7.4 shows the price development for the ten most valuable species in the Mediterranean. 99% of the landings data used to generate average prices for the Mediterranean are Italian data. Although price data was also provided by Slovenia, Malta and Cyprus; the production volumes of these countries for these ten species were much lower than Italy in these years, and therefore do not significantly affect the average prices in the table above. Furthermore, it has not been possible to include figures from Greece plus Spanish and French fleets operating in the Mediterranean, and these three are significant operators in the Mediterranean. The prices must therefore be considered with caution.

In general, the figures in Table 7.4 show that nominal prices have modestly increased for the majority of these species. The exception to this is swordfish and red mullet, which have decreased in price comparing 2004 with 2006. For some of the species, the increase in price is more than likely to have exceeded inflationary increases.

**Table 7.4 Price of top 10 most valuable species in the Mediterranean**

	2003	2004	2005	2006
European anchovy (ANE)	1.53	1.54	1.5	1.77
European hake (HKE)	7.14	7.16	7.71	7.45
Deep-water rose shrimp (DPS)	8.84	7.89	8.78	9.64
Swordfish (SWO)	11.36	11.86	11.03	11.02
Norway lobster (NEP)	16.61	15.03	16.08	17.85
Common cuttlefish (CTC)	7.55	7.98	8.21	8.45
Marine molluscs nei (MOL)	3.77	4.5	4.28	4.81
Red mullet (MUT)	5.91	5.43	5.77	5.86
Giant red shrimp (ARS)	18.16	18.21	18.42	20.96
Finfishes nei (FIN)	5.69	6.49	6.82	7.1

Note: Includes landings from Italy, Slovenia, Malta and Cyprus

Price development of the top 10 most important species in terms of landings value, landed in the Atlantic fishing region is shown in Table 7.5. In light of the remarks made in relation to the calculation of Mediterranean prices, the Atlantic prices should also be considered with caution.

The data reveals a general upward trend in the average annual price (first sale price) for most of these species being particularly evident between 2005 and 2006. The average price of some of these species decreased slightly between 2003 and 2004, before the upward trend took place. In particular, the average nominal price for monkfish and common sole increased significantly between 2003 and 2006, while mackerel and haddock had the largest relative increase.

**Table 7.5 Price of top 10 most valuable species in the Atlantic Ocean**

	2003	2004	2005	2006
Norway lobster (NEP)	3.71	3.57	3.93	4.19
Atlantic cod (COD)	1.75	1.61	1.78	1.84
Atlantic herring (HER)	0.24	0.21	0.24	0.28
Atlantic mackerel (MAC)	0.51	0.55	0.81	0.86
Common sole (SOL)	9.22	9.41	10.16	11.46
Anglerfishes nei (ANF)	3.48	3.62	3.83	4.03
Great Atlantic scallop (SCE)	2.06	1.99	2.02	2.2
European plaice (PLE)	1.74	1.55	1.68	1.68
Yellowfin tuna (YFT)	0.9	0.87	1.06	1.17

Haddock (HAD)	0.85	0.9	1.04	1.3
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Note: Includes landings from Belgium, Denmark, Estonia, France, Finland, Germany, Ireland, Latvia, Lithuania, The Netherlands, Poland, Portugal, Sweden and United Kingdom

If inflation is taken into account, it is likely that the real average prices of most of these species have remained fairly stable. However it is hard to confirm this without building the differing inflation rates of each country into this analysis. Further, seasonal variations in fish prices can in many cases be significant, however the data available for this analysis does not allow for investigation of seasonal trends.

Some very preliminary investigations were made in relation to fleets and the fish price they obtain for their landings. Appendix 2 shows the average fish prices distributed on countries, fleets and gear types (active, passive or combination). Making comparisons are very difficult because the fleets operate under very different circumstances in relation to for instance stock situation, regulatory framework and market competition.

A few points can however be extracted from the figures at this early stage. Thus, it seems in most countries that vessels using active gears obtain prices that are marginally lower than prices obtained by vessels using passive gears of the same length category. Smaller vessels generally also seem to obtain marginally higher average prices than vessels in larger length categories. For vessels over 40m using active gears, the average price is in many cases significantly lower than vessels in smaller length categories. This is presumably because the majority of vessels over 40m are large pelagic vessels, who generally land large volumes of lower value pelagic species.

It must again be stressed that further work is needed within this area in order to sufficiently describe development in fish prices and determinants of this development. At the current basis, adequately detailed data is not available to carry out such an analysis.

## 8. ANNUAL FOCUS 2008: THE FUEL ISSUE

### 8.1. Introduction

Expenditure on marine fuel represents a significant component in the running costs of fishing fleets. There are however differences in consumption between fleets. Mobile gears and long distance fleets consume more fuel and so their economic performance relies heavily on the price of fuel. On the other hand, in passive gear and artisanal fleets, expenditure on fuel is lower in relation to total expenditure and the price of fuel is likely to have a smaller impact on the economic performance of the vessel.

The latest round of fuel price increases represents a major economic shock to European fishing fleets. If the fishermen could compensate the increase in fuel price by raising the price of fish, this could in principle result in a neutral overall effect on profitability. However, this is not possible.

The short term impact of rising fuel costs are a reduction in cash flow, and hence in gross value added that the vessels create. Increased fuel costs affect fishers' behaviour, and the fishing fleet is likely to react in a tactical manner that minimises the cost increase. The fleets will react tactically depending on their vessel type and financial performance.

In the short term, fishing fleets and invested capital is considered fixed. Fishermen can therefore not alter the size of this in order to account for increases in fuel prices. Thus if running costs exceed the expected value of landings, the result could be that vessels stay in port. Long term effects are more uncertain and a deeper analysis of the consequences of a long run steady fuel price increase is required. It is expected that strategic changes in the behaviour of fleets e.g. locating new fishing grounds (within a shorter fishing distance); investment in new technologies that reduce fuel consumption, improvements in fish detection techniques, or even changes in vessels physical capital levels will be required in the long term.

### 8.2. Development in fuel prices

The average fuel price in the different Members States for the period 20<2008 is shown in Table 8.1.

**Table 8.1 Member state fuel prices 20<2008 (€/litre)**

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Belgium	0.300	0.280	0.250	0.260	0.310	0.430			
Denmark	0.365	0.330	0.313	0.333	0.386	0.512	0.583	0.587	0.688
Finland	0.288	0.261	0.233	0.250	0.293	0.407	0.452	0.450	0.605
France	0.294	0.257	0.235	0.244	0.288	0.397	0.449	0.453	0.560
Germany	0.290	0.270	0.240	0.240	0.280	0.410			
Greece	0.309	0.261	0.233	0.245	0.301	0.405			
Italy	0.361	0.338	0.310	0.328	0.380	0.513	0.560	0.550	0.640
Ireland	0.227	0.261	0.231	0.248	0.272	0.375	0.440	0.470	
Lithuania	0.277	0.273	0.302	0.320	0.351	0.442	0.482	0.492	
Netherlands	0.236	0.230	0.205	0.212	0.247	0.353	0.410	0.410	0.500
Poland	0.349	0.272	0.259	0.273	0.331	0.435	0.445	0.475	0.573
Portugal	0.225	0.245	0.303	0.323	0.376	0.493			
Spain		0.235	0.211	0.217	0.287	0.385	0.420	0.500	

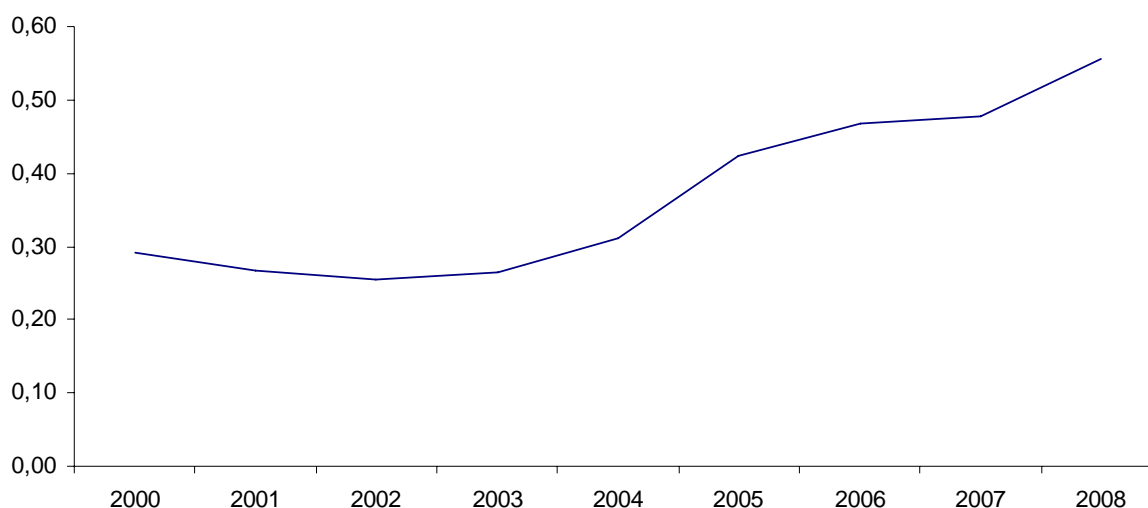
Sweden	0.285	0.227	0.218	0.233	0.264	0.381	0.431	0.434	0.480
United Kingdom	0.290	0.268	0.260	0.251	0.291	0.400	0.443	0.446	0.542

Source: Different national sources. 2008-figures are the latest available price within each member state (primarily March/April).

Fuel price trends in each MS are mostly similar almost but there are variations in the fuel price levels. Denmark and Italy have the highest fuel price while The Netherlands has the lowest. According to the data, these differences are not negligible, given that the difference between the highest price (Denmark) and the lowest one (The Netherlands) in 2008 is 26%. Dutch fleets are currently experiencing the fuel price that Denmark paid in 2005. However, further analysis is required to address why the prices levels differ. Reasons could included unaccounted discounts, transportation costs etc.

The average price trend is presented in Figure 8.1. Given that fuel prices have not been adjusted for inflation, it can be said that the increasing fuel price trend contains two significant price shocks. The first shock was in the period 2004-05 and the price increase in that period was around the 33%. Currently we are facing a new price shock which in fact represents (at 15<sup>th</sup> of March 2008) exactly the same change (33%).

**Figure 8.1 Mean development in fuel price**



Source: See Table 8.1

A fuel price evolution marked by shocks is especially relevant for fishing fleets given that price rises occur in a short time period making it impossible to adapt the fleet to the new cost framework, or make changes in their behaviour, giving that the capital is considered to be fixed. Such adjustments are more probable to see with gradual fuel price increases.

### 8.3. Fuel consumption for different vessel types and Member States

Table 8.2 presents various fuel cost and consumption indicators for selected MS fleets. The table includes average vessel values for the fuel cost, consumption, cost and consumption by fishing day, and the importance of the fuel cost by unit landed in weigh and value, in 2006.

It is without a very detailed analysis difficult to compare the use of fuel between the different fleets in different Member States. However, generally, as expected, mobile gears have larger fuel consumption and thus fuel costs compared to passive gears. Also vessels catching high amounts of low value species, have low fuel costs per landed kilo, but the same fuel costs per landed value as similar vessels catching low amounts of high value species. The fuel costs per landed kilo must therefore be analysed with great care.

**Table 8.2 Fuel consumption and cost, 2006**

	Fuel cost /vessel (Euro)	Fuel con- sumption /vessel (Litres)	Fuel cost/ days at sea (Euro)	Fuel con- sumption /days at sea (Litres)	Fuel cost /landed weight (Euro/kilo)	Fuel cost /value of landings (Euro)
<i>Belgium</i>						
Demersal trawl and seine 24-40m	355,083	739,756	1,414	2,947	1.75	0.43
Other mobile gears 12-24m	136,839	285,082	1,520	3,167	3.58	0.43
Beam trawl 24-40 m	565,374	1,177,862	2,338	4,871	1.93	0.43
<i>Cyprus</i>						
Demersal trawl and seine 12-24m	46,665	86,161	325	599	1.03	0.16
Passive gears <12m	798	1,474	4	7.56	0.36	0.05
Polyvalent passive gears 12-24m	10,503	19,394	282	520	0.50	0.17
<i>Denmark</i>						
Demersal trawl and seine 12-24m	25,597	58,728	189	433	0.09	0.11
Pelagic trawl and seine 24-40m	184,962	447,006	944	2,281	0.07	0.19
Pelagic trawl and seine >40m	365,544	900,457	1511	3,723	0.03	0.13
<i>Estonia</i>						
Demersal trawl and seine >40m	776,515	1,669,720	4,331	9,313	0.41	0.26
Pelagic trawl and seine 12-24m	4,572	9,380	74	153	0.04	0.34
Pelagic trawl and seine 24-40m	48,329	112,353	532	1,237	0.04	0.33
<i>Finland</i>						
Drift nets and fixed nets 12-24m	5,463		102		0.36	0.13
Pelagic trawl and seine 12-24m	17,797		218		0.02	0.16
Pelagic trawl and seine 24-40m	85,267		810		0.02	0.18
<i>France</i>						
Drift nets and fixed nets <12m	7,131	16,380	39	89	0.88	0.15
Demersal trawl and seine 12-24m	119,326	307,303	559	1,438	0.80	0.24
Pelagic trawl and seine over 40 m	1,132,252	2,600,434	4,186	9,614	0.17	0.3
<i>Germany</i>						
Demersal trawl and seine 24-40m	45,156	98,745	230	505	0.02	0.02
Polyvalent mobile gears 12-24m	75,951	138,706	582	1,063	0.11	0.17
Pelagic trawl and seine >40m	56,173	119,521	377	802	0.00	0.01
<i>Greece</i>						
Passive gear 12-24m	10,177	24,009	35	82	0.40	0.16

Beam trawl 12-24m	82,552	198,254	314	755	0.44	0.22
Beam trawl 24-40m	103,631	289,453	384	1,072	0.38	0.11
<i>Ireland</i>						
Dredgers 24-40m	22,561		1,634		2.72	0.92
Demersal trawl and seine 12-24m	71,102		497		0.47	0.29
Pelagic trawl and seine 24-40m	174,161		2,266		0.07	0.17
<i>Italy</i>						
Demersal trawl and seine 12-24m	57,897	106,967	358	661	1.84	0.26
Demersal trawl and seine 24-40m	146,086	245,064	825	1385	2.58	0.28
Beam trawl 12-24m	67,104	125,614	476	891	1.48	0.29
<i>Lithuania</i>						
Drift nets and fixed nets <12m	279	401	15	21	0.20	0.22
Demersal trawl and seine 24-40m	40,298	85,255	366	775	0.29	0.28
<i>Netherlands</i>						
Beam trawl 24-40m	463,171	1,129,684	2,838	6,921	1.91	0.54
Beam trawl >40m	704,392	1,718,029	3,622	8,834	1.51	0.43
Pelagic trawl >40m	1,575,645	6,302,579	6,388	25,575	0.06	0.19
<i>Poland</i>						
Demersal trawl and seine 12-24m	22,804	53,033	194	450	0.30	0.34
Pelagic trawl and seine 24-40m	114,462	266,191	695	1616	0.07	0.34
<i>Sweden</i>						
Demersal trawl and seine 24-40m	115,410	338,847	764	2,243	0.41	0.29
Pelagic trawl and seine 24-40m	143,524	429,592	1,207	3,612	0.05	0.23
Pelagic trawl and seine >40m	418,367	924,873	2,178	4,815	0.05	0.29
<i>United Kingdom</i>						
Demersal trawl and seine >40m	581,260	1,311,518	2,752	6,211	0.35	0.32
Pelagic trawl and seine >40m	688,748	1,554,047	7,174	16,187	0.07	0.18
Beam trawl >40m	872,129	1,967,818	4,079	9,204	1.59	0.86

Note: Figures of Belgium, Malta, Greece and Cyprus have not been validated by national expert.

#### 8.4. Economic and social impacts of increasing fuel prices, 2003-2006

In order to consider the consequences of increasing fuel prices from 2003 to 2006, two tables are utilised here. Table 8.3 shows for selected fleets, the share that fuel costs make up of operational costs (variable and vessel costs) for the period 2003-2006. The share that fuel costs make up of total income (including both fishing and non-fishing related income) is shown in Table 8.4.

It is clear that a shift to a higher percentage is observed from 2003-2004 to 2005-2006 with respect to the share that fuel costs make up of total operational costs. As expected, the vessels using mobile gears are more affected compared to vessels using non-mobile/passive gears.

**Table 8.3 Fuel cost share of operational costs (%)**

	2003	2004	2005	2006
<i>Belgium</i>				
Demersal trawl and seine 24-40m	26.99	25.92	6.19	36.87
Other mobile gears 12-24m	26.99	25.92	7.73	36.87
Beam trawl 24-40m	26.99	25.92	38.35	36.87
<i>Cyprus</i>				
Demersal trawl and seine 12-24m			36	37
Passive gears <12m			46	16
Polyvalent passive gears 12-24m			14	23
<i>Denmark</i>				
Demersal trawl and seine 12-24m	9.7	11.4	13.3	12.6
Pelagic trawl and seine 24-40m	17.9	21.0	25.0	24.9
Pelagic trawl and seine >40m	15.2	18.6	21.5	21.3
<i>Estonia</i>				
Demersal trawl and seine >40m			37.68	32.38
Pelagic trawl and seine 12-24m			15.12	
Pelagic trawl and seine 24-40m			19.52	
<i>France</i>				
Drift and fixed nets <12m	5.44	6.1	7.09	7.56
Demersal trawl and seine 12-24m	17.07	20.02	22.44	24.33
Pelagic trawls and seine >40m	15.95	16.12	18.12	23.65
<i>Finland</i>				
Drift nets and fixed nets 12-24m	4.87	6.71	10.05	11.05
Pelagic trawl and seine 12-24m	9.94	14.41	26.8	26.2
Pelagic trawl and seine 24-40m	13.44	13.76	24.23	14.25
<i>Germany</i>				
Demersal trawl and seine 24-40m			12.3	12.65
Polyvalent mobile gears 12-24m				16.45
Pelagic trawl and seine >40m				11.7
<i>Greece</i>				
Passive gear 12-24m		35.65	25.75	33.7
Beam trawl 12-24m		38.86	33.81	34.43
Beam trawl 24-40m		54.52	31.67	34.62
<i>Ireland</i>				
Demersal trawl and seine 12-24m	18.57	16.05	22.01	23.92
Pelagic trawl and seine 24-40m		11.74	10.39	9.63
Pelagic trawl and seine >40m	12.37	12.45	15.54	14.42
<i>Italy</i>				
Demersal trawl and seine 12-24m	27.52	28.27	36.75	36.2
Demersal trawl and seine 24-40m	28.19	32.83	39.37	38.58
Beam trawl 12-24m		37.85	45.34	40.74
<i>Lithuania</i>				
Drift nets and fixed nets <12m		19.01	19.37	14.42
Drift nets and fixed nets 24-40m		20.48	21.04	
Demersal trawl and seine 24-40m		34.1	33.49	35.83



<i>Netherlands</i>				
Beam trawl 24-40m	28.32	32.77	43.71	46.83
Beam trawl >40m	31.56	35.46	47.97	50.33
Pelagic trawl >40m	17.88	18.07	18.71	21.69
<i>Poland</i>				
Demersal trawl and seine 12-24m		48.77	52.2	39.09
Demersal trawl and seine 24-40m		37.16	38.39	41.43
<i>Spain</i>				
Demersal trawl and seine 24-40m	14.9	19.03	23.03	
Pelagic trawl and seine 24-40m	11.22	12.26	12.79	
Pelagic trawl and seine >40m	12.73	15.73	20.87	
<i>Sweden</i>				
Demersal trawl and seine 24-40m	24.84	22.59	30.88	31.7
Pelagic trawl and seine 24-40m	33.37	33.19	35.54	34.15
Pelagic trawl and seine >40m	33.37	33.19	36.41	40.76
<i>United Kingdom</i>				
Demersal trawl and seine >40m	32.64	32.64	37.49	26.45
Pelagic trawl and seine >40m			14.45	21.35
Beam trawl >40m	46.23	46.23	51.56	52.69

Note: Figures of Belgium, Malta, Greece and Cyprus have not been validated by national expert.

The consequences of rising fuel costs is more blurred when looking at the share that fuel costs make up of total income, cf. Table 8.4. For a range of fleets, the share that fuel costs have of total income has gone up, thus reducing the economic performance, unless other means of reducing costs are implemented. However, for some fleets the share is more or less unchanged, thus implying that those vessels have expanded their activities or in some other ways increased their income.

**Table 8.4 Fuel cost share of income (%)**

	2003	2004	2005	2006
<i>Belgium</i>				
Demersal trawl and seine 24-40m	24.48	23.12	18.33	42.99
Other mobile gears 12-24m	24.49	23.04	8.61	42.95
Beam trawl 24-40m	24.47	23.72	39.5	42.98
<i>Cyprus</i>				
Demersal trawl and seine 12-24m			34	17
Passive gears <12m			49	5
Polyvalent passive gears 12-24m			17	17
<i>Denmark</i>				
Demersal trawl and seine 12-24m	9.6	11.8	12.7	10.9
Pelagic trawl and seine 24-40m	16.13	19.9	22.5	19.4
Pelagic trawl and seine >40m	11.4	13.9	13.1	12.7
<i>Estonia</i>				
Demersal trawl and seine >40m			27.74	25.19
Pelagic trawl and seine 12-24m			28.39	33.86
Pelagic trawl and seine 24-40m			36.93	32.8
<i>France</i>				

Drift and fixed nets <12m	4.43	4.94	5.69	6.26
Demersal trawls and seine 12-24m	14.75	17.49	20.11	21.67
Pelagic trawls and seine >40m	13.11	13.27	14.25	20.4
<i>Finland</i>				
Drift nets and fixed nets 12-24m	4.24	5.78	7.88	9.34
Pelagic trawl and seine 12-24m	8.64	11.7	20.74	20.49
Pelagic trawl and seine 24-40m	11.93	12.19	19.57	11.68
<i>Germany</i>				
Demersal trawl and seine 24-40m			2.13	1.78
Polyvalent mobile gears 12-24m				17.02
Pelagic trawl and seine >40m				1.14
<i>Greece</i>				
Passive gear 12-24m	117.91	11.78	11.43	16.12
Beam trawl 12-24m	16.39	30.76	16.18	21.58
Beam trawl 24-40m		46.5	15.88	11.04
<i>Ireland</i>				
Demersal trawl and seine 12-24m		15.16	20.49	23.13
Pelagic trawl and seine 24-40m		7.43	8.15	7.31
Pelagic trawl and seine >40m		11.23	13.07	10.92
<i>Italy</i>				
Demersal trawl and seine 12-40m	20.09	21.84	26.34	26.11
Demersal trawl and seine 24-40m	20.34	24.98	29.09	28.41
Beam trawl 12-24m		31.34	32.77	29.31
<i>Lithuania</i>				
Drift nets and fixed nets <12m		12.69	16.91	22.09
Drift nets and fixed nets 24-40m		23.46	13.8	
Demersal trawl and seine 24-40m		16.15	25.88	27.56
<i>Netherlands</i>				
Beam trawl 24-40m	23.41	27.86	38.89	41.77
Beam trawl >40m	26.12	30.13	42.87	45.06
Pelagic trawl >40m	14.28	15.88	15.37	17.63
<i>Poland</i>				
Demersal trawl and seine 12-24m		44.89	47.34	33.91
Demersal trawl and seine 24-40m		33.85	41.06	34.18
<i>Spain</i>				
Demersal trawl and seine 24-40m	16.33	20.47	24.56	
Pelagic trawl and seine 24-40m	11.35	10.61	13.03	
Pelagic trawl and seine >40m	11.76	14.52	17.76	
<i>Sweden</i>				
Demersal trawl and seine 24-40m	17.26	16.68	28.77	29.46
Pelagic trawl and seine 24-40m	33.37	33.19	35.54	34.15
Pelagic trawl and seine >40m	33.37	33.19	36.41	40.76
<i>United Kingdom</i>				
Demersal trawl and seine >40m	25.66	25.66	33.85	26.52
Pelagic trawl and seine >40m			10.00	12.77
Beam trawl >40m	45.36	45.36	55.02	52.57

Note: Figures of Belgium, Malta, Greece and Cyprus have not been validated by national expert.

### 8.5. Scenario analysis of increasing fuel prices for the fishing fleets

Fuel prices are currently fluctuating significantly with a clear upward trend. In this section, a short term static comparative has been done for changes in fuel prices. In that sense, changes in Gross Value Added (GVA) has been computed for two different fuel price levels:

1. fuel price per 15<sup>th</sup> march 2008 implying an increase of 33% compared to the 2006 average
2. average fuel price in 2006 increased with 50%

The results of these calculations assuming that the increasing fuel prices do not result in behavioural changes, where fishermen alter their activity and cost structure, are shown in Table 8.5.

**Table 8.5 Short-term effect of fuel increase for selected fleets on GVA (%-change)**

	Fuel price equal 2008 level	Fuel price increase 50% compared to 2006
<i>Belgium</i>		
Demersal trawl and seine 24-40m	-60.08	-88.75
Other mobile gears 12-24m	-60.34	-89.13
Beam trawl 12-24m	-59.92	-88.57
<i>Cyprus</i>		
Demersal trawl and seine 12-24m	-9	-13
Passive gears <12m	-2	-4
Polyvalent passive gears 12-24m	-14	-21
<i>Denmark</i>		
Demersal trawl and seine 12-24m	-6	-9
Pelagic trawl and seine 24-40m	-12	-18
Pelagic trawl and seine >40m	-7	-10
<i>Estonia</i>		
Demersal trawl and seine >40m	-26.26	-38.72
<i>France</i>		
Drift and fixed nets <12m	-3.4	-5.0
Demersal trawls and seine 12-24m	-16.1	-23.8
Pelagic trawls and seine >40m	-15.6	-23.0
<i>Germany</i>		
Demersal trawl and seine 24-40m	-0.66	-0.98
Polyvalent mobile gears 12-24m	-17.21	-25.42
Pelagic trawl and seine >40m	-0.41	-0.60
<i>Greece</i>		
Passive gear 12-24m	-8.7	-12.8
Beam trawl 12-24m	-13.8	-20.4
Beam trawl 24-40m	-4.9	-7.2
<i>Ireland</i>		
Demersal trawl and seine 12-24m	-27	-39
Pelagic trawl and seine 24-40m	-4	-6
Pelagic trawl and seine >40m	-7	-10

<i>Italy</i>		
Demersal trawl and seine 12-24m	-16	-24
Demersal trawl and seine 24-40m	-18	-27
Beam Trawler 12-24m	-20	-29
<i>Lithuania</i>		
Demersal trawl and seine 24-40m	-17.94	-26.50
<i>Netherlands</i>		
Beam trawl 24-40m	-42.5	-62.8
Beam trawl >40m	-49.3	-72.9
Pelagic trawl >40m	-13.3	-19.7
<i>Poland</i>		
Demersal trawl and seine 12-24m	-32	-48
Pelagic trawl and seine 24-40m	-29	-44
<i>Sweden</i>		
Demersal trawl and seine 24-40m	-45.72	-67.53
Pelagic trawl and seine 24-40m	-17.03	-25.15
Pelagic trawl and seine >40m	-25.50	-37.67
<i>United Kingdom</i>		
Demersal trawl and seine >40m	-27.72	-40.95
Pelagic trawl and seine >40m	-6.97	-10.29

Note: Figures of Belgium, Malta, Greece and Cyprus have not been validated by national expert.

From Table 8.5, it is observed that an increase of 33% in fuel price will create a reduction of the average Gross Value Added (GVA) of around 28% for the included fleets, which are all using gears giving rise to considerable fuel use, i.e. primarily mobile gears in form of trawl. If fuel prices increase with 50% instead compared to the level in 2006, this implies a reduction in GVA of 42%.

The results illustrate the severe consequences that increasing fuel prices have on the economics of especially the fleet having high fuel consumption. The vessels do have some possibilities of adapting their behaviour to this new situation, but as fuel prices continues to increase, the short term behavioural changes to reduce fuel consumption disappears. In a longer time perspective, fishermen have the possibility of making energy saving investments onboard their vessels, such a new engine, propels, hull design etc., but this takes time and costs money.

## 9. APPENDIX 1 - COVERAGE

Country	Number of vessels <sup>8</sup>	Summary of missing data
Belgium	107 DCR vs. 121 VR	
Cyprus	499 DCR vs. 890 VR	<ul style="list-style-type: none"> <li>Capital costs all years</li> <li>Investment 2006</li> <li>Parts of the population missing</li> </ul>
Denmark	21,60 DCR vs. 3,320 VR	<ul style="list-style-type: none"> <li>Covers only parts of the Danish fleet</li> </ul>
Estonia	1,036 DCR vs. 1,048 VR	
Finland	255 DCR vs. 3,311 VR	<ul style="list-style-type: none"> <li>Covers only parts of the Finnish fleet</li> <li>Fuel consumption</li> <li>Fixed costs</li> <li>Repair costs</li> </ul>
France	4,741 DCR vs. 7,871 VR	<ul style="list-style-type: none"> <li>Data from vessels from Corsica and overseas vessels</li> <li>Fixed costs have been included in repair costs</li> </ul>
Germany	2,154 DCR vs. 2,142 VR	<ul style="list-style-type: none"> <li>Has uploaded without append</li> </ul>
Greece	18,359 DCR vs. 18,246 VR	<ul style="list-style-type: none"> <li>Value of landings by species</li> </ul>
Ireland	1,414 DCR vs. 1,374 VR	<ul style="list-style-type: none"> <li>Revenue/cost data for some fleets 2006</li> </ul>
Italy	14,390 DCR vs. 14,501 VR	<ul style="list-style-type: none"> <li>Investment 2002-2005</li> </ul>
Latvia	201 DCR vs. 929 VR	<ul style="list-style-type: none"> <li>Capital costs</li> <li>Fuel consumption</li> <li>All parameters of 2006</li> </ul>
Lithuania	246 DCR vs. 212 VR	<ul style="list-style-type: none"> <li>Fixed costs</li> <li>Inconsistencies of the population between the years</li> </ul>
Malta	1,411 DCR vs. 1,410 VR	<ul style="list-style-type: none"> <li>Revenue and costs 2006</li> <li>Employment 2006</li> <li>Financial 2006</li> <li>Price 2006</li> </ul>
Netherlands	762 DCR vs. 852 VR	
Poland	919 DCR vs. 1,081 VR	
Portugal mainland	4,312 DCR 5,080 DCR total Portugal vs. 9,968 VR	<ul style="list-style-type: none"> <li>Covers only parts of the Finnish fleet</li> <li>Capital costs</li> <li>Fuel consumption</li> <li>Fixed consumption</li> <li>Economic data for four important fleets</li> </ul>
Portugal Azores	641 DCR	<ul style="list-style-type: none"> <li>Capital costs</li> <li>Fuel consumption</li> <li>Price</li> <li>Financial position</li> <li>Rev and cost 2006</li> <li>Employment 2006</li> </ul>
Portugal Madeira	127 DCR	<ul style="list-style-type: none"> <li>Revenue and cost</li> <li>Fuel consumption 2002-2005</li> <li>Employment 2006</li> </ul>
Slovenia	184 DCR vs. 167 VR	<ul style="list-style-type: none"> <li>All revenue and cost except variable cost</li> </ul>
Spain	13,504 DCR vs. 13,877 VR	<ul style="list-style-type: none"> <li>Fuel consumption</li> <li>Value of landings</li> <li>Borrowing</li> <li>Investment 2006</li> <li>Revenue and costs 2006</li> <li>Prices</li> </ul>
Sweden	1,564 DCR vs. 1,597 VR	
United Kingdom	6,868 DCR vs. 6,961 VR	<ul style="list-style-type: none"> <li>Revenue and cost for some fleets</li> </ul>

<sup>8</sup> Number of vessels reported versus number of vessels in the Community fleet register as of 1/6 2006

# 10. APPENDIX 2 – FISH PRICES BY COUNTRY, GEAR TYPE AND VESSEL LENGTH

Country	Gear type	Vessel length	2003	2004	2005	2006
Belgium	ACTIVE	12-24m	3.62	3.5	4.09	4.71
	ACTIVE	24-40m	3.89	3.69	4.01	4.44
Madeira	ACTIVE	12-24m	1.3	0.85	1.17	1.21
	PASSIVE	<12m	2.08	2.06	2.1	2.31
	PASSIVE	12-24m	1.95	1.78	1.78	2.15
	PASSIVE	24-40m	1.51	1.18	0.96	0.9
Azores	COMBINATION	<12m	3.35	3.46	3.9	4.02
	COMBINATION	12-24m	3.47	3.86	4.35	4.74
	COMBINATION	24-40m	1.34	1.12	1.49	1.07
Cyprus	ACTIVE	<12m				10
	ACTIVE	12-24m			5.41	6.57
	ACTIVE	24-40m			2.86	
	PASSIVE	<12m			7.06	7.17
	PASSIVE	12-24m			3.39	2.86
Denmark	ACTIVE	<12m	0.21	0.19	0.23	0.31
	ACTIVE	12-24m	0.6	0.51	0.61	0.75
	ACTIVE	24-40m	0.24	0.22	0.3	0.4
	ACTIVE	>40m	0.18	0.19	0.27	0.27
	PASSIVE	<12m	2.02	2.02	2.34	2.57
	PASSIVE	12-24m	2.35	2.21	2.58	2.66
	COMBINATION	<12m	1.89	1.45	1.74	1.82
	COMBINATION	12-24m	1.66	1.32	1.03	1.03
Estonia	ACTIVE	12-24m				0.13
	ACTIVE	24-40m			0.11	0.13
	ACTIVE	>40m			1.5	1.58
	PASSIVE	<12m			0.27	0.33
Finland	ACTIVE	12-24m	0.19	0.18	0.11	0.13
	ACTIVE	24-40m	0.2	0.13	0.12	0.14
	PASSIVE	<12m	0.7	0.57	0.63	0.7
	PASSIVE	12-24m	1.61	1.54	2.17	2.72
France	ACTIVE	<12m	2.79	2.76	2.09	2.42
	ACTIVE	12-24m	2.41	2.54	2.49	2.54
	ACTIVE	24-40m	2.09	2.18	2.19	2.24
	ACTIVE	>40m	0.74	0.73	0.78	0.73
	PASSIVE	<12m	3.43	3.33	3.52	3.8
	PASSIVE	12-24m	4.4	4.39	4.51	4.71
	PASSIVE	24-40m	3.91	3.87	3.8	3.84
	PASSIVE	>40m		5.53	4.22	4.12
	COMBINATION	<12m	3.08	2.16	1.24	2.4
	COMBINATION	12-24m	2.28	2.93	2.41	2.41
	COMBINATION	24-40m	3.66		3.2	
Germany	ACTIVE	<12m		0.79	0.8	0.96
	ACTIVE	12-24m		1.19	1.56	1.5
	ACTIVE	24-40m		1.23	1.23	1.42
	ACTIVE	>40m		0.37	0.42	0.42
	PASSIVE	<12m		0.78	0.75	0.83
	PASSIVE	12-24m		2.26	2.35	2.84
	PASSIVE	24-40m		0.96	1.46	4.31
	COMBINATION	<12m				0.91
Greece	ACTIVE	<12m	0.24			0.12
	ACTIVE	12-24m	0.26	1.08	1.12	1.16
	ACTIVE	24-40m		1.34	1.45	2.46
	PASSIVE	<12m	23.29	3.37	4.03	4.64
	PASSIVE	12-24m	8.25	4.55	4.41	5.3
	COMBINATION	<12m		1.38	1.89	1.74
	COMBINATION	12-24m	0.17	1.13	1.11	1.42

Ireland	ACTIVE	12-24m	1.33	1.34	1.48	1.66
	ACTIVE	24-40m	0.64	0.66	0.78	0.89
	ACTIVE	>40m	0.3	0.32	0.33	0.36
	PASSIVE	12-24m	1.24	1.04	1.15	1.29
	PASSIVE	24-40m	0.46	0.59	1.09	1.04
	COMBINATION	<12m	1.4	1.61	1.88	1.62
Italy	ACTIVE	<12m	5.05	6.4	4.63	5.42
	ACTIVE	12-24m	3.88	4.08	4.3	4.46
	ACTIVE	24-40m	3.94	3.62	4.68	4.21
	ACTIVE	>40m	1.54	1.5	1.8	1.79
	PASSIVE	<12m	6.66	7.23	7.73	8.42
	PASSIVE	12-24m	6.59	8.18	8.15	7.86
	COMBINATION	<12m	5.72	6.1	5.08	
	COMBINATION	12-24m	5.69	6.28	8.03	4.54
Latvia	ACTIVE	12-24m	0.18	0.16	0.18	
	ACTIVE	24-40m	0.2	0.18	0.21	
	ACTIVE	>40m	1	1	0.43	
	PASSIVE	<12m	1	0.22	0.33	
	PASSIVE	24-40m	1.56	1.4	1.55	
Lithuania	ACTIVE	24-40m		0.37	0.63	1.06
	PASSIVE	<12m		0.67	1.17	0.9
	PASSIVE	24-40m			1.39	1.38
Malta	ACTIVE	<12m			0.82	0.67
	ACTIVE	12-24m			1.27	1.16
	ACTIVE	24-40m			1.67	1.91
	PASSIVE	<12m			1.6	1.71
	PASSIVE	12-24m			2.22	2.55
	PASSIVE	24-40m			1.86	2.66
Netherlands	ACTIVE	<12m	2.41	1.14	2.26	2.35
	ACTIVE	12-24m	2.57	2.39	2.69	2.66
	ACTIVE	24-40m	3.1	3.22	3.28	3.14
	ACTIVE	>40m	0.6	0.55	0.54	0.64
	PASSIVE	<12m	3.81	4.54	5.78	6.03
	PASSIVE	12-24m	0.66	3.49		0.55
Poland	ACTIVE	<12m		0.34	0.43	
	ACTIVE	12-24m		0.6	0.67	0.87
	ACTIVE	24-40m		0.15	0.18	0.24
	PASSIVE	<12m		0.61	0.74	0.83
	PASSIVE	12-24m		1	1.14	1.45
	PASSIVE	24-40m		0.92	1.1	
	COMBINATION	12-24m		1.08	1.18	
Portugal	ACTIVE	<12m	0.99			0.78
	ACTIVE	12-24m	0.97	0.72	0.77	0.64
	ACTIVE	24-40m	1.01	1.04	0.99	0.66
	PASSIVE	<12m	2.28	2.24	2.17	2.74
	PASSIVE	12-24m	2.51	2.58	2.23	1.37
	PASSIVE	24-40m	0.4	0.43	0.32	0.06
	COMBINATION	<12m	1.75			1.11
	COMBINATION	12-24m	0.8	0.77	0.84	0.69
	COMBINATION	24-40m	0.64	0.72	0.53	0.24
Slovenia	ACTIVE	<12m				2.93
	ACTIVE	12-24m				1.99
	ACTIVE	24-40m				1.24
	PASSIVE	<12m				2.98
	PASSIVE	12-24m				2.82
Sweden	ACTIVE	<12m	1.42	2.36	2.13	2.52
	ACTIVE	12-24m	1.6	1.31	1.01	1.04
	ACTIVE	24-40m	0.25	0.28	0.26	0.27
	ACTIVE	>40m	0.18	0.19	0.2	0.19
	PASSIVE	<12m	1.79	1.9	1.98	2.14

	PASSIVE	12-24m	1.42	1.65	1.46	1.68
United Kingdom	ACTIVE	<12m	1.63	1.51	1.71	2.05
	ACTIVE	12-24m	1.21	1.27	1.37	1.76
	ACTIVE	24-40m	1.23	1.31	1.42	1.53
	ACTIVE	>40m	0.47	0.4	0.43	0.48
	PASSIVE	<12m	1.98	1.97	2.05	2.29
	PASSIVE	12-24m	1.19	1.17	1.33	1.42
	PASSIVE	24-40m	0.97	1.2	1.68	1.54
	PASSIVE	>40m	0.5			
	COMBINATION	<12m	1.95	2.33	2	2.01
	COMBINATION	12-24m		0.56		
	COMBINATION	>40m	0.16			



## **11. APPENDIX 3 – DETAILED COUNTRY TABLES**

The detailed country tables are published on the STECF web site on <https://stecf.jrc.ec.europa.eu/home> together with the final report.

## **ANNEX II DECLARATIONS OF EXPERTS**

Declarations of invited experts are published on the STECF web site on <https://stecf.jrc.ec.europa.eu/home> together with the final report.

European Commission

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**Abstract**

This Annual Economic Report gives an overview of the economic situation for the European fishing fleets. Compared to previous years, this report includes a more detailed description of each Member States fisheries besides the range of tables.

The report has been produced by a working group (SGECA 08-02) under the Scientific, Technical and Economic Committee for Fisheries (STECF), which convened 21-25 April 2008 in Copenhagen, Denmark. The group consisted of 19 experts and 3 persons from DG MARE and DG JRC.

The report is covering data from 2003 to 2006, but there are also included comments about the trends and outlook in 2007 and first part of 2008 for the fisheries in each of the included Member States. The report constitutes of a European overview and national analysis of the profitability in the fisheries. Furthermore a study on fish prices and the fuel issue is included. The economic data is collected within the framework of the Data Collection Regulation (DCR); cf. Council Regulation (EC) No 1543/2000 of 29 June 2000. The working group observed that there are some data missing with respect to years, variables and coverage for several countries. The produced tables must therefore be read with care taking these elements into consideration. However, the current publication is considered to be the most comprehensive publication of economic figures for fisheries in the European Union.

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